AD-A269 891

Technical Report 976

Senior Leadership in a Changing World Order: Requisite Skills for U.S. Army One- and Two-Star Assignments

Kenneth W. Lucas and Joan Markessini
CAE-Link Corporation

April 1993

DTIC
ELECTE
SEP 07 1993
S
E
D

93-20554

United States Army Research Institute
for the Behavioral and Social Sciences

93 9 0 014

U.S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency Under the Jurisdiction
of the Deputy Chief of Staff for Personnel

EDGAR M. JOHNSON
Acting Director

Research accomplished under contract
for the Department of the Army

CAE-Link Corporation

Technical review by

Herbert Barber, U.S. Army War College
Steven R. Stewart

Accesion For		
NTIS CRA&I		✗
DTIC TAB		☐
Unannounced		☐
Justification		
By		
Distribution /		
Availability Codes		
Dist	Avail and / or Special	
A-1		

REPORT DOCUMENTATION PAGE

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 1993, April	3. REPORT TYPE AND DATES COVERED Final Nov 90 – Oct 92

4. TITLE AND SUBTITLE	5. FUNDING NUMBERS
Senior Leadership in a Changing World Order: Requisite Skills for U.S. Army One- and Two-Star Assignments	MDA903-87-C-0625 63007A 792 2403
6. AUTHOR(S) Lucas, Kenneth W.; and Markessini, Joan	

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)	8. PERFORMING ORGANIZATION REPORT NUMBER
CAE-Link Corporation 209 Madison Street Alexandria, VA 22314	--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
U.S. Army Research Institute for the Behavioral and Social Sciences ATTN: PERI-RO 5001 Eisenhower Avenue Alexandria, VA 22333-5600	ARI Technical Report 976

11. SUPPLEMENTARY NOTES

T. Owen Jacobs, Contracting Officer's Representative

12a. DISTRIBUTION/AVAILABILITY STATEMENT	12b. DISTRIBUTION CODE
Approved for public release; distribution is unlimited.	--

13. ABSTRACT (Maximum 200 words)

For this report, as part of a larger effort, interviews were conducted with 48 Brigadier Generals and 26 Major Generals to identify key position performance requirements. The interviews were theory-based, exploring the correctness of Stratified Systems Theory (SST) formulations about the structure of work at senior and strategic levels. Content analysis of the tape-recorded interviews provided broad support for SST. As expected, complexity of performance requirements systematically increased with increasing position grade. However, there were some inversions, e.g., the addition of installation command responsibilities to table of evaluation unit command invariably increased position complexity profoundly. The analysis explicitly focused on cognitive skills required for successful performance. In the view of incumbents, key requirements included cognitive skills (mental mapping, problem management, planning/envisioning), dispositional skills/traits (dealing with uncertainty/risk taking, controlling through indirect means), interpersonal skills (networking, consensus building, getting feedback, using communications technology, interfacing effectively with the external environment, and communicating cross-culturally and

(Continued)

14. SUBJECT TERMS Leadership Strategic performance requirements Cognitive skills Stratified systems theory	15. NUMBER OF PAGES 94
	16. PRICE CODE --

17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited

NSN 7540-01-280-5500

13. ABSTRACT (Continued)

precisely), and resources management (personnel and materiel). Findings at the one- and two-star level were compared with earlier findings at more senior levels.

Senior Leadership in a Changing World Order: Requisite Skills for U.S. Army One- and Two-Star Assignments

Kenneth W. Lucas and Joan Markessini
CAE-Link Corporation

Perhaps the highest priority of any robust and healthy organization is the development of new generations of leaders to fill positions of top responsibility. Without the capability for renewal of leadership as the need arises, no organization can be assured of a secure future. Of even greater significance is the purposeful direction of the leader development process. Doctrinally, the Army's leader development process is sequential and progressive. It must also be goal-directed, so that the intermediate steps toward the end goal follow the correct path.

This report is the third in a series based on extensive interviews with the Army's General Officers. The overall objective of this effort is to identify the end-goal skills, knowledges, and abilities that underlie effective performance at the top levels. A previous report described performance requirements at the three- and four-star level and concluded that cognitive and conceptual skills are among the most critical. This report complements the preceding one by extending the analysis downward to one- and two-star assignments. The findings have been furnished to the Commandant of the Army War College and will be used to develop courseware.

This research was conducted under a Memorandum of Agreement between the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) and the U.S. Army War College (AWC) entitled "Program of Research in Support of the U.S. Army War College" and dated 23 March 1988 and updated 9 July 1992. The work was done by the Strategic Leadership Technical Area of the Manpower and Personnel Research Division of ARI with the assistance of CAE-Link Corporation.

EDGAR M. JOHNSON
Acting Director

SENIOR LEADERSHIP IN A CHANGING WORLD ORDER: REQUISITE SKILLS
FOR U.S. ARMY FOR ONE- AND TWO-STAR ASSIGNMENTS

EXECUTIVE SUMMARY

Requirement:

To identify one- and two-star assignment performance
requirements and to provide limited comparison with previously
identified three- and four-star performance requirements.

Procedure:

Interviews were conducted with one- and two-star general
officers, paralleling interviews previously conducted with three-
and four-star general officers. The interviews were tape
recorded, transcribed, and content analyzed. Specific mentions
of knowledges, skills, or abilities were tallied and aggregated
by grade and assignment type.

Findings:

Four broad categories of knowledge and skills emerged from
the analysis: cognitive skills (mental mapping, problem manage-
ment, and planning/envisioning, cognitive skills/personality
traits dealing with uncertainty and risk taking, communication/
interpersonal skills (networking, consensus building, feedback,
and use of communications technology), and resources management
(personnel and materiel). In general, a clear-cut progression of
cognitive skills was found across all four general officer ranks
for those variables common to both sets of analyses.

The findings provide strong support to predictions based on
Stratified Systems Theory (SST). The conclusion is that SST is
generalizable to the military, and that the responsibilities of
Army general officers generally fit well into the model. This
conclusion is supported by the finding that planning time frames
of general officers in the present sample were substantially
short of theoretical predictions, though the personal time hori-
zons of those who voiced them fit the model fairly well. The
conclusion is that position performance requirements be more
narrowly focused than the capabilities of position incumbents.

Utilization of Findings:

These findings have been furnished to the Commandant of the
Army War College and will be used to develop courseware. They
have also been furnished to the Leader Development Office, U.S.
Army Command and General Staff College, to assist in the formula-
tion of future eader development strategies.

SENIOR LEADERSHIP IN A CHANGING WORLD ORDER: REQUISITE SKILLS
FOR U.S. ARMY ONE- AND TWO-STAR ASSIGNMENTS

CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

SENIOR LEADERSHIP IN A CHANGING WORLD ORDER: REQUISITE SKILLS FOR U. S. ARMY ONE- AND TWO-STAR ASSIGNMENTS

INTRODUCTION

In the increasingly complex world relationships that have unfolded in recent years, a major thrust of the United States Army has been toward understanding and developing senior leaders capable of dealing with that increased complexity and uncertainty. The period of relaxed tensions with the former Warsaw Pact countries has not lessened the need for well-prepared military leaders. In fact, today's amorphous, multi-polar world is in many respects more complex and potentially more volatile than the bi-polar world of the past. The need for a flexible and cognitively agile general officer corps thus is not diminished. Military leaders today and in the future must have the capacity to deal with crisis events at the lower spectrum of war, making rapid decisions that may have significant political and international consequences, but without losing current capability to direct synchronized deployment and employment of large Joint and multi-national forces.

The requirements of senior leaders in peacetime political military settings, for example, the Military Committee of NATO, are also more exacting than in the past. Their mastery demands an understanding of the complex multi-polar political, economic, social and cultural characteristics of the world and of the competing requirements of national security and areas of vital interest. In fact, one of three themes that clearly emerge from the interview series conducted by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) with U.S. Army Four-star generals is the de facto and official functioning of the U.S. Army as an integrated system that relates to other institutions (Markessini & Lucas, in preparation). "Whether in terms of command climate, Jointness, the role of the military in a national society or in the international arena, the complexity of the Army's institutional relationships and the impact of those relationships on national and international defense policy and decision making" is addressed in all the interviews. At that level, decisions, often made without the benefit of complete information, require gaining support from other national agencies and the ability to rapidly assess gains and losses in a complex negotiating process.

The increasingly complex roles of the United States military in international relationships demand at least two major types of military executive: the warrior, and the soldier-statesman scholar. The latter is represented by such leaders as Dwight David Eisenhower, former President of the United States and General of the Army and George C. Marshall, architect of Allied victory in World War II and author of the plan that saw reconstruction of Europe following that war. Von Clausewitz was perhaps the first to write of the role of the military as an instrument of policy. "The point that must be made absolutely

clear is namely that war is simply the continuation of policy by other means." (Howard and Paret, 1976, p. 28). Operation Desert Storm in fact required a different role for the combined forces marshalled under General Norman Schwartzkopf in Saudi Arabia than that played ou* in the theatres of World War II, in the Korean War, and even 3 recently as in Vietnam.

Nevertheless, the soldier-statesman scholar has not been universally well regarded here. In the military ethic of Japanese culture, he has been prized and may very well have been "a factor in the extraordinary military successes of a nation so small." (Markessini, in preparation). By contrast, this sort of military leader may have seemed troublesome for the American military culture, particularly in the last twenty or thirty years.

The increased complexity of the global military role comes in the context of repeated reductions in the U. S. Armed Forces, especially the Army, from the Vietnam era onward. Within the next three years, as the world community moves into an era of relaxed tension in the aftermath of the dissolution of the Soviet Union and Warsaw Pact, the U. S. Army probably will be reduced by a third. Future leaders must be able to resource, train, maintain, and, if required, deploy that smaller force into the multipolar environment. They must also be able to expand the Active force rapidly through the assimilation of Reserve Component forces.

The challenge is to maintain the effectiveness of the force, both Active and Reserve, in an era of ill-defined national objectives and in competition with domestic programs that demand increased resources. In addition, although the numbers of officers have been reduced apace, the social, economic, and ethnic composition of the pool from which officers are selected and promoted has changed. This change creates pressure to either improve the ability to identify candidates who will be successful at higher military ranks or enhance the quality of the pool through more refined selection, training, and development strategies.

The need to improve leader development was articulated not long after the end of the Vietnam war. Several important initiatives were undertaken to achieve this objective, among them the following:

Establishing the Center for Army Leadership at Fort Leavenworth, Kansas, to enhance the Army's capability for modernizing leadership doctrine and instruction.

Revising the basic leadership doctrine for company grade commissioned and non-commissioned officers, FM 22-100.

2

The decision to create a series of leadership manuals paralleling the "how-to-fight" manuals.

A major, concerted effort to create a sequential and progressive leadership development system that would have as its highest priority the maintenance of a "war reserve" of leaders capable of rapidly assuming responsibilities of command at least two echelons higher during general mobilization.

Establishing a second year for the Command and General Staff Officers' Course (GSOC) to be attended by a select group of first-year graduates retained for further intense, focused study.

Generating and putting into operation a systematic "Leader Development Plan," monitored by the senior leadership of the Army.

Perhaps most important for present purposes, the DCSPER, DA, established a Senior Leadership Coordinating Committee (SLCC) to oversee development work at the senior levels. In AR 600-100 three levels of unique leadership requirements were defined:

 - direct, embracing battalion and below;

 - senior, encompassing brigade through division; and,

 - executive, including Corps and Echelons Above Corps command.

The Army Research Institute supported the SLCC in this effort. First, to gain an understanding of the nature of work at the Army's executive level, data were collected by means of nearly 70 in-depth structured interviews with Three- and Four-star General Officers and members of the Army's senior executive service. A limited content analysis of the e interviews identified broad categories of performance requirements (Harris and Lucas, in preparation).

Findings from this research prompted continued work to identify the critical skills underlying capacity to deal with these performance requirements, and to determine the sequence (if any) with which they develop. An extensive literature review of cognitive skills requisite for effective executive functioning (Markessini, in preparation) essentially confirmed key elements of the theoretical base guiding the work, and provide a more general empirical base for them. The literature review, in conjunction with a preliminary analysis of the general officer data, was used to develop a taxonomy of executive cognitive capabilities (Markessini, in preparation). The model identifies six generic cognitive tasks at the executive level.

3

An in-depth cross-sectional analysis of all General Officer ranks is now under way to further refine the taxonomy and to identify the frequency and length at which military executives and senior leaders addressed requisite cognitive skills during interview. Finally, an instructional technology was developed for use in the Army War College's elective program and a course on creative problem-solving was designed to give students a set of experiences that would provide insight into how they could operate in complex, volatile, uncertain, and ambiguous environments very like those described by the Three- and Four-star General Officers during their interviews.

The long-range plan guiding the overall effort includes the requirement to gain an understanding of the work, requisite skills, and development of General Officers. This understanding is essential to address another long-term objective, development of a sound theoretical basis for the structuring of a sequential and progressive leader developmental process. The cross-sectional General Officer study (Markessini, in preparation) is expected to provide the cognitive and metacognitive skill level objectives for this progression and to help fully structure the development process.

The purposes of the research reported in the present document thus were to:

1.   Gain an understanding of the senior leader's (Brigadier and Major General) work (<u>Executive Leadership</u>, 1988), essentially expanding the knowledge base downward from the Lieutenant General and General level already documented (Harris & Lucas, in preparation).

2.   Further evaluate the adequacy of Jaques' Stratified Systems Theory (SST) for understanding the nature of work requirements in complex military organizations (Jaques, 1976).

3.   Add to the empirical basis for Senior War College curriculum adjustment.

THEORETICAL CONTEXT

Organizational Leadership

The interdisciplinary study of senior and executive leadership is little more than two decades old. However, it appears that at least three broad principles have emerged: that leaders must add value to their organizations (Hollander, 1951; Jacobs, 1971; Jacobs & Jaques, 1987, 1990a, 1990b); that performance requirements in complex, hierarchical organizations show progressive increases in complexity with level (Jaques, 1976; Jaques, Gibson & Isaac, 1978; Simon, 1977); and that successful performance at successively higher levels of complex organizations

4

depends on the capacity to deal with this complexity (Katz & Kahn, 1966; Hosking & Morley, 1988; Jaques, 1985; Jacobs & Jaques, 1987). The linkage of sequential and progressive increases in performance requirements, on the one hand, with sequential and progressive increases in capacity to perform is perhaps the key to understanding the required developmental processes. Indeed, prior to the last two decades, advancement of the field had suffered from an inattention to the intrinsic and dynamic relationship between leadership knowledge and skills and organizational characteristics and process (Hosking and Morley, 1988).

Mintzberg (1973) was among the very first to articulate this relationship. In addition to focusing on more senior levels of leadership, he systematically collected data on the broader performance requirements on the position incumbent in terms of the <u>role that position serves in the organization</u>. Mintzberg moved beyond a narrow focus on interpersonal processes to the consideration of how actions of an incumbent "add value" to the organization.

Another relatively recent elaboration in the body of research on organizational leadership is the articulation of organizational structure in which administrative functions and tasks at higher and lower organizational levels are contrasted. Simon (1977), and Katz and Kahn (1975) all characterize leadership performance requirements in the framework of three broad domains or levels of functioning. In one set of Jaques models, the mission of the organization is cast in terms of the functions and products of the "operational spine" as well as of higher level decision makers, both of which are supported by other components of the total organization. The "organizational" domain that directs and facilitates the work of the lowest or "production" domain is thought to top out at the level of a Strategic Business Unit (SBU). Within the Army, this "organizational" domain includes brigade, division, and equivalent TDA organizations. In Stratified Systems Theory it is to the organizational level that the U. S. Army senior leaders described in this research belong.

Table 1 shows the task requirements and characteristics of U. S. Army TOE grades organized by stratified systems strata, domains, and postulated time spans of work. This model suggests two important conclusions.

- Each organizational level "adds value" to adjacent levels. "Next-lower" levels do the output work directed by the "next-higher" level or pass the requirement through to still lower level accompanied by significant translation of the requirement to make it more "rational" (Thompson, 1967).

Table 1: Task Requirements and Characteristics by Stratified Systems Theory Organizational Stratum and Domain for U.S. Army TOE Grade

STRATUM	DOMAIN	TOE GRADE	TYPE OF UNIT SUPERVISED W/CIVIL SERVICE AND INDUSTRIAL CORRELATES		(CIVIL SERVICE)	(INDUSTRY & COMMERCE)	TASK REQUIREMENTS AND CHARACTERISTICS — SYSTEMS, RESOURCE, AND POLICY TASK REQUIREMENTS	SCOPE OF WORK — REPRESENTATIVE NO. OF SUBORDINATES	SCOPE OF WORK — SPHERE OF INFLUENCE	SST POSTULATED TIME SPAN OF WORK
VII	INDIRECT / STRATEGIC SYSTEMS	GENERAL	UNIFIED OR SPECIFIED COMMAND OR FIELD ARMAMENT		CABINET SEC.	CORPORATION	CREATE AND INTEGRATE COMPLEX SYSTEMS. ORGANIZE ACQUISITION OF MAJOR RESOURCES. CREATE POLICY.	500,000 - 1,000,000	CONTINENTAL	20+ YRS
VI		LT GEN	CORPS		DEPUTY SEC.	GROUP	OVERSEE DIRECTLY OPERATION OF SUBORDINATE DIVISIONS. ALLOCATE RESOURCES. APPLY POLICY.	50-60,000	NATIONAL	10-20 YRS
V		MAJ GEN	DIVISION OR TA ORGANIZATION		UNDER SEC.	FULL DMS	DIRECT OPERATION OF COMPLEX SYSTEMS. ALLOCATE ASSIGNED RESOURCES. IMPLEMENT POLICY.	11,000-12,000	REGIONAL	5-10 YRS
IV	ORGANIZATIONAL	BRIG GEN — — — COLONEL	SEPARATE BRIGADE — — — DIV BRIGADE		ASST. SEC.	MEDIUM-SIZED BUSINESS	DIRECT OPERATION OF SYSTEMS. TAILOR OR TASK ORGANIZE RESOURCE ALLOCATIONS TO INTERDEPENDENT SUBORDINATE PROGRAMS AND SUBSYSTEMS. IMPLEMENT POLICY.	5,000 — — — 2500	SECTOR 10-15KM	4-7 YRS
III	DIRECT	LT COL/COM — — — MAJOR	BATTALION — — — BATTALION ORT LEVEL		PRINCL STAFF	ONE-MAN BUSINESS OR UNIT	DEVELOP AND EXECUTE PLANS AND TASK ORGANIZE SUB-SYSTEMS. PRIORITIZE RESOURCES. TRANSLATE AND IMPLEMENT POLICY AND ASSIGNED MISSIONS.	500-800	4,000-5,000M	1+ YRS
II	COMBAT	CPT/1st SGT	COMPANY PLATOON		ASST. PRINCL	SECTION	SUPERVISE DIRECT PERFORMANCE OF SUB-SYSTEMS. ANTICIPATE/SOLVE REAL TIME PROBLEMS. SHIFT RESOURCES. TRANSLATE AND IMPLEMENT POLICY.	100-200	1500M	3+ MONTHS
I		LT/NCO	NCOs & ORs		CLERICAL & OFFICE SUPERVISOR	SUPERVISOR & SHOP-& OFFICE FLOOR	DIRECT PERFORMANCE OF WORK. USE PRACTICAL JUDGMENT TO SOLVE ONGOING PROBLEMS.	3-40	400M	LESS THAN 3 MONTHS

There are critical tasks at each organizational level. These are tasks which the incumbent must perform if they are to be performed at all. (By definition, they are too complex for the "next-lower" level, and demand time which "next-higher" levels may not have.)

Conceptual Skills for Leadership

In the view of Jacobs and Jaques (1990b), what discriminates leadership work at each of these three domains is primarily the relative degree of conceptual complexity of the performance requirements. The higher the organizational domain, the greater the degree of conceptual complexity. This they predicate on the following: the number of interdependent variables in any given situation; the intricacy of the interdependencies, including contingent features that are probabilistic in nature; the existence of competing strategies; the certainty with which the elements and their effects can be known, given that some events may be hidden or disguised; the rate of change of these elements over time; and, in the time dimension, the intervals involved in cause-and-effect chains and the variance in the timing of antecedent events. At each successively higher level, an incumbent leader must be able to understand, account for, and act upon the increasingly intricate causal relationships in decision, problem management, and planning processes. Each new set of conceptual skills, with its associated perspective, is therefore superimposed on conceptual skills acquired at the lower levels.

Jacobs and Jaques (1990b) argue at length for the importance of an adequate frame of reference in dealing with the increasing conceptual load. "The executive must in theory be able to build into his frame of reference enough cause and effect chains to enable inference to the overarching rules and principles that pertain to the [organizational] system at this level. Thus, "executives should have much broader perspectives (causal maps) than incumbents at the organizational [or, "indirect"] level of management." Moreso than is the case with mid-level leaders, frames of reference required at the strategic level are developed from exposure to and in order to be able to deal effectively with the external environment in considerably more proactive ways than mid-level leaders do inside their organizations. Simon (1977) articulated these functions in the following way:

Executives and their staffs spend a large fraction of their time surveying the economic, technical, political, and social environment to identify new conditions that call for new actions. They probably spend an even larger fraction of their time, individually or with their associates, seeking to invent, design, and develop possible sources of action for handling situations where a decision is needed. They spend a small frac-

7

tion of their time in choosing among alterative actions already developed to meet an identified problem and already analyzed in terms of their consequences. They spend a moderate portion of their time assessing the outcomes of past actions as part of a repeating cycle that leads again to new decisions. (p. 40)

Jaques posited that the cognitive capacity required at each organizational level shows systematic development over time. Central to Jaques' concept of cognitive capacity are the notions of cognitive power and discontinuous changes in cognitive state, which Jaques orders into seven strata operationally defined by time frame ranges. (It should be noted that the postulate of "discontinuous changes in cognitive state" cannot be supported by the broader literature. This issue will be re-visited later in this report.)

According to Jaques, cognitive power is "the mental force a person can exercise in processing and organizing information and in constructing an operating reality" (Jaques, 1985, p. 107). This "operating reality" is a frame of reference, or cognitive map, which models the cause and effect relationships underlying the events which the individual must understand in order to be effective in what he or she does. The greater the cognitive power, the bigger, or more extensive in depth, breadth, and scope (in time captured), and the more complex the individual's model of reality can be. As cognitive power increases and reaches specific critical points, identifiable in terms of the maximum time horizon achieved, apparently discontinuous changes occur in the person's capacity to deal with complexity. In fact, the discontinuities in organizational strata are supposed to occur because of discontinuities in cognitive mode. Jaques has devised a set of developmental curves that present the attainment of the cognitive complexity held necessary at each of the seven organizational strata as a regular, indeed predictable, pattern (Jaques, 1989).

Senior Leader Requirements

In terms of this theoretical context, the senior leader level, i.e., the level of Brigadier and Major General in the U. S. Army, poses difficult developmental challenges. In general, senior leaders are well removed from the great majority of organizational members involved in direct task accomplishment, e.g., soldiers at the squad, crew and team level, and thus cannot as easily exercise "direct" influence over the accomplishment of the tasks they perform. Though they have a comparatively small number of subordinates whom they do "directly" influence, the majority of their critical tasks do not involve the direct supervision of those who are doing task work. Their critical tasks focus more on the indirect facilitation of task accomplishment at the squad-crew-team level, through formulation of poli-

8

cies and procedures, and through resources tailoring. This includes, among many other requirements, the management of interdependencies among subordinate elements, their differential resourcing in relation to mission requirements, the coordination of effort over time, the development of policies that foster human resources development, and the formulation of policies and philosophies that create the positive command climate essential for subordinate leader development.

Because "indirect" means are not "concrete" and "direct", the logic suggests a requirement at the senior leader level for a higher order of conceptual skill and for the capacity for abstract thought. Abstract analytic thinking skills, as opposed to the need for synthesis from executives, would seem critically important in the middle domain. In fact, Ackoff (1978) contends that the only effective way of dealing with increased levels of complexity at the higher levels, in large part because of the extended time frames over which chains of events occur, is to move beyond analytical or reductionist thinking toward synthesis and integration.

While general extrapolations from this set of theoretical assumptions appear accurate as applied to military organizations, military organizational structure imposes additional unique performance and conceptual requirements. For one, there are the specific and differing substantive contents of the billets they occupy, and thus, in addition, the developmental tracks they had previously pursued. Markessini and Lucas (in preparation) grouped these into five basic types: command and field positions, staff positions, technical specialties, training and development, and special billets. These cross-cut all four General Officer ranks. They also differ in their proportional representations at each rank. The predominant technical specializations for the four General Officer ranks are:

- Generals: command and field.
- Lieutenant Generals: staff, with an almost equal spread among the command and field, technical specialties, and training and development positions.
- Major Generals: staff, overwhelmingly, with a clear secondary emphasis on the technical specialties.
- Brigadier Generals: staff and technical specialties.

These differing representations are shown in Figure 1. The hypothesis that these differences impose differing cognitive skill requirements is currently under test and will be reported at a later time.

The issue is the question of what part of a given position's critical tasks is generic, determined by organizational level, and what part is specific, determined by technical content of developmental track and position. Simon (1977) clearly addresses

9

PROFESSIONAL SPECIALIZATIONS

GO RANK (W/NUMBERS OF BILLETS*)	COMMAND & FIELD	STAFF	TECHNICAL SPECIALTIES	TRAINING & DEVELOPMENT	SPECIAL BILLETS
FOUR-STARS (N=13)	9	2	0	1	1
THREE-STARS (N=49)	9	18	11	8	3
TWO-STARS (N=142)	19	56	36	18	4
ONE-STARS (N=198)	33	66	67	20	11
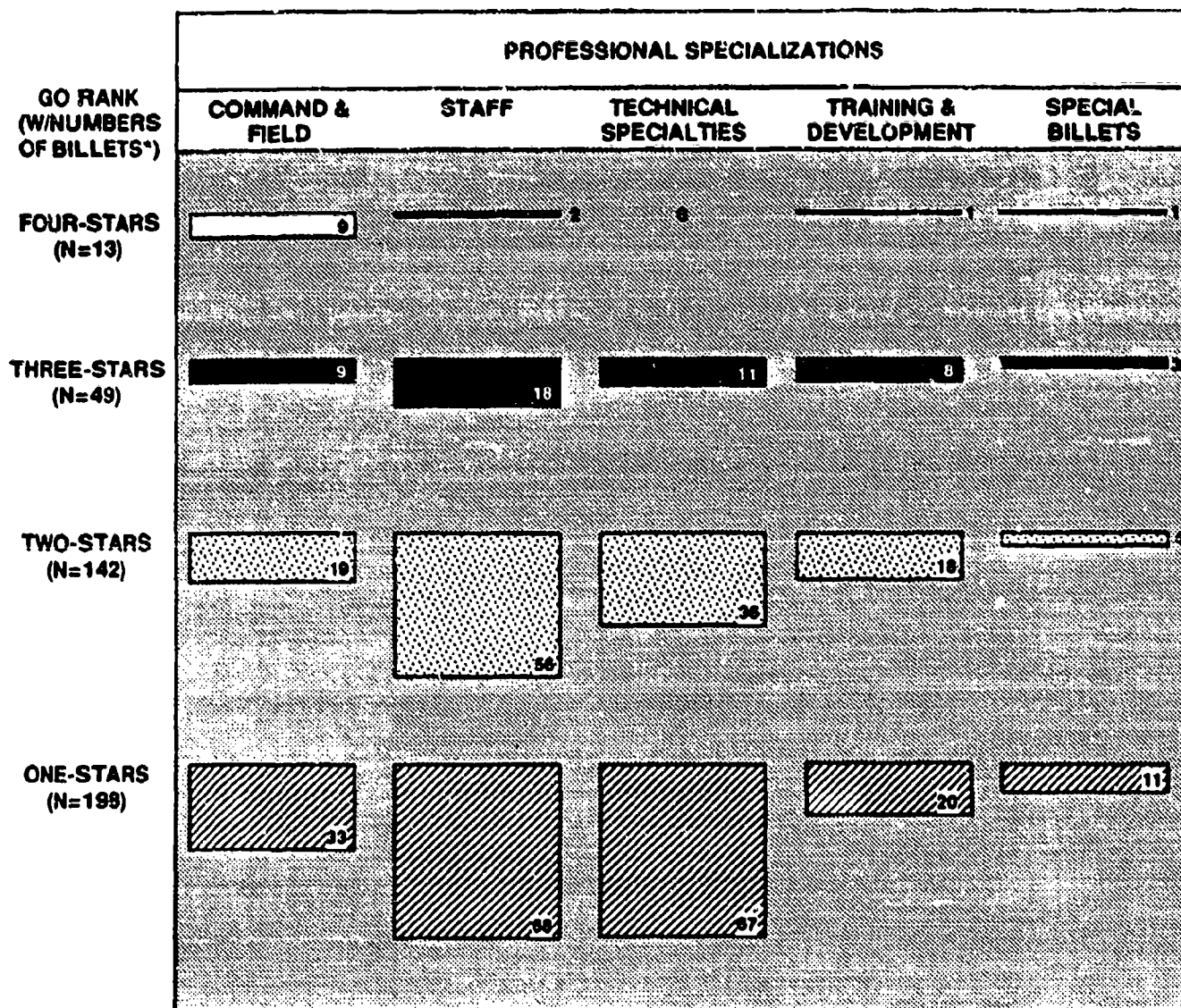
* Ns given for the professional specializations are the actual numbers of General Officers at the time of interview. The numbers given for billets are the number Congressionally approved for General Officers by respective ranks. Variances are due to frocking, in which officers are filling positions that are a grade higher than the rank of the incumbent.

Figure 1. Relative emphases among five professional specializations within four general officer ranks

the generic component of critical tasks in his discussion of the centralization-decentralization of decision issues. "We want to find the proper level in the organizational hierarchy -- neither too high nor too low -- for each important class of decisions." (Simon, 1977, p. 115). By contrast, Mumford draws attention to specifics, by asserting that the amount of time an executive uses a generic process and the importance of effective application of this process to leadership activity, will "vary with respect to position and to the particular nature of its requirements ... the **development** of alternative solutions may be more important for staff officers, whereas the **evaluation** of alternative solutions may be more important for line officers." (Mumford et al., 1986, p. 15)

Even so, it is expected that the relative degree to which each of the six generic executive cognitive skills (Markessini, 1991b) is required will increase with at successively higher General Officer ranks. Jacobs and Jaques argue that executives should have much broader mental maps than senior leaders (those at the organizational mid-level). Many senior level positions in the U. S. Army are in direct support of executive leaders, and not just subordinate to them in an organizational hierarchy. In those positions, to be effective, these leaders must have the capacity to understand and share in, if not fully act upon, the executive's frame of reference.

As stated in the Introduction, a principal purpose of the research was to evaluate the adequacy of Stratified Systems Theory for application to of the U. S. Army as a leader development template. Based on the theory, Army senior leaders, that is, Brigadier and Major Generals, should be in positions that require the ability to:

- direct the operation of major "bounded systems," e.g., Divisions, and tailor these organizations for effective operations

- deal with issues of resourcing based on prioritization of sub-system missions and functions, taking into account long-range tasks required for future (three to seven years distant) operational capability as well as short-range requirements

- implement policies that will foster the development of positive command climate throughout the organization, and high levels of military cohesion at the lower echelons

- integrate and coordinate staff functions both horizontally and vertically

- build teamwork among subordinate elements

11

.   "grow" subordinate leaders through mentoring and coach-
    ing

RESEARCH OBJECTIVES AND METHOD

Objectives

The central objectives of the research are to describe the
work, skills, and development required of current Army senior
level leaders and to compare them to the theoretical models
provided by Stratified Systems Theory. The first-order objec-
tives were to describe the:

.   organizations led by One- and Two-star General Officers

.   relationships among those organizations

.   reported work of One- and Two-star General Officers

.   skills and knowledges reported as required to accom-
    plish the requisite work at the One- and Two-star
    levels

.   development processes involved in acquiring those
    skills

Based on these descriptions, second-order objectives were to
compare the:

.   present One- and Two-star functions and reporting
    relationships to the theoretical model, Jaques Strati-
    fied Systems Theory

.   work reported in One- and Two-star positions to the
    work hypothesized to be requisite at each of those
    levels

.   developmental activities reported to the model of
    organizational requirements and cognitive development
    theorized.

Data Collection

Sampling Procedure, Sample Size and Composition

During the period of data collection, 1988-1989, 198 One-
star and 142 Two-star U. S. military positions were held by Army
incumbents. Approximately 30% of the incumbents were selected
for interview, with the goal of interviewing at least 20%.

To structure the Brigadier and Major General Officer sample,

12

a complete list of these billets was developed from the General Officer Roster prepared by the General Officers Management Office, Office of the Chief of Staff, U. S. Army. All duty positions for those General Officers were reviewed, without consideration of their incumbents. These positions were then categorized by geographic area. The intent in placing the positions by area was to ensure all types of positions were represented in a given geographic area, and every attempt was made to secure that representative sample. This approach was necessitated by restriction of travel by the research staff to CONUS and USAREUR. It was determined that an adequate cross-section of duty positions could be obtained represented by interviewing selected officers assigned within CONUS and Europe. Where feasible, two similar positions within a type were elected: for example, a division commander within the continental United States and another in Europe; spokesmen for two differing schools of thought about a key issue; the Commandants of a TRADOC service school and an Army institution of higher education. The inclusion of unique billets such as the Army Public Affairs Officer was likewise a deliberate choice. The billets are a cross-section of the 198 One-star and 142 Army Two-star billets extant in 1988-89. Table 2 gives the selections for the sample.

Each of the Brigadier and Major Generals selected for interview were telephoned and given a brief overview of the project objectives and purpose. Those Generals consenting to participate in the project were scheduled for interview and were mailed a copy of the interview protocol. All of the Generals agreed to participate in the project; however, it was not possible with the time and resources available to interview all of those identified.

Forty-eight Brigadier(24%) and 26 Major Generals (18%) were interviewed. Seven officers in the grade of Colonel, who had either been selected for promotion or who occupied a General Officer duty position, were also interviewed. Of these, for one reason or another, 12 could not be included in subsequent analysis. Thus, the subject sample for this research was reduced to 18 percent (62 of 341) of the One- and Two-star General incumbents in 1989: 42 (21%) and 20 (14%), respectively. Table 3 shows the 42 One-star and the 20 Two-star assignments and the type of position -- Army-only, Joint, or Allied -- in the final sample, ordered within occupational specialization. For the One-star billets, 61 percent (11 of 18) of the Command and Field positions, 22 percent (17 of 78) of the Staff positions, six percent (4 of 70) of the Technical Specialties, 31 percent (8 of 26) of the Training and Development positions, and 18 percent (2 of 11) are included in the sample. For the Two-star billets, 44 percent (seven of 16) of the Command and Field positions, 17 percent (10 of 60) of the Staff positions, and 17 percent (3 of 18) of the Training and Development positions are included.

13

Table 2

U.S. Army One- and Two-Star Selections for the ARI Subject Sample
Page 1 of Table 2

U.S. Army One- Two Star Selections for the ARI Subject Sample		
POSITION	**ONE STAR**	**TWO STAR**
Command and Field Positions		
Command with Organizational & Installation Responsibilities		
Deputy Commanding General Corps CONUS	0	1
Deputy Commanding General Corps OCONUS	0	1
Commanding General Division CONUS	0	2
Commanding General Division OCONUS	1	2
Commanding General Post CONUS	1	0
Commanding General Corps Artillery/Support Command CONUS	0	0
Commanding General Corps Artillery/Support Command OCONUS	5	1
Assistant Commanding General Division CONUS	2	0
Assistant Commanding General Division OCONUS	0	0
Command without Organizational & Installation Responsibilities		
Deputy Commanding General Corps CONUS	0	0
Deputy Commanding General Corps OCONUS	0	0
Commanding General Division CONUS	0	4
Commanding General Division OCONUS	0	0
Commanding General Corps Artillery/Support Command CONUS	0	0
Commanding General Corps Artillery/Support Command OCONUS	0	0
Assistant Commanding General Division CONUS	2	0
Assistant Commanding General Division OCONUS	0	0
Staff Positions		
Chief of Staff, Major Army Command		
CONUS	5	2
OCONUS	0	1
Staff Member of		
Alliance	3	0
Department of Defense	2	1
Joint Chiefs of Staff	3	1
Army Secretariat	1	2
Army Staff	5	2
Major Army Command Staff	1	1
Joint Command Staff	1	1

Table 2

U.S. Army One- and Two-Star Selections for the ARI Subject Sample
Page 2 of Table 2

POSITION		ONE STAR	TWO STAR
Technical Specialization			
Command		2	0
Staff		4	0
Training and Development			
Command			
With Organizational and Installation Responsibilities		1	0
Without Installation Responsibilities		3	1
School Commandant/Assistant Commandant			
With Organizational and Installation Responsibilities		1	1
Without Installation Responsibilities		0	1
Staff		3	0
Special Billets			
Command		1	0
Staff		1	0
Total US Army One- Two Star General Offices Selected for Interview		48	25

Table 3 Page 1

U.S. Army One- and Two-Star Billets, Position Types, and Reporting Channels Represented in the ARI Subject Sample

ONE-STAR BILLETS	BILLET TYPE	POSITION TYPE	REPORTING CHANNELS
Command and Field Positions			
Commanding General, 1st Infantry Division (Forward)	Installation	Army/Alliance	Multiple
Commanding General, 3rd Support Command (Corps), USAREUR and Seventh Army		Army	Single
Commanding General, VII Corps Artillery, USAREUR and Seventh Army			
Commanding General, Fort Belvoir, Military District of Washington			
Commanding General, V Corps Artillery, USAREUR and Seventh Army			
Commanding General, Special Operations Command, European Command		Joint	Dual
Assistant Division Commander, 7th Infantry Division (Light), Fort Ord, CA		Army	Single
Assistant Division Commander, 101st Airborne Division (Air Assult) Fort Campbell, KY	Non-Installation		
Assistant Division Commander, 2nd Armored Division, Fort Hood, TX			
Assistant Division Commander, 9th Infantry Division, Fort Lewis, WA	Installation		
Deputy Commanding General, 21st Support Command, U.S. Army Europe			
Staff Positions			
Director of Force Programs, Office of the Deputy Chief of Staff, Operations, U.S. Army	None	Army	Single
Chief of Staff, Sixth United States Army, Presidio of San Francisco		Army	Single
Executive to the Supreme Allied Commander, Europe, Supreme Allied Powers, Europe		Alliance	
Chief, Policy & Programs Branch, Policy Division, SHAPE		Alliance	
Senior Military Assistant to the Deputy Secretary of Defense		Joint	
Director, Resource Management, J-8, Forces Command, Fort McPherson, GA		Joint	
Deputy Chief of Public Affairs, Office of the Secretary of the Army		Army	
Director, Transportation, Energy & Troop Support, ODCSLOG, U.S. Army			
Chief of Staff, III Corps and Fort Hood, Fort Hood, TX		Joint	
Assistant Deputy Director, Politico-Military Affairs (J-5), Joint Chiefs of Staff		Joint	
Deputy Chief of Staff, Army Central Group		Alliance	
Director, Plans and Operations, Office of the Deputy Chief of Staff for Logistics, U.S. Army		Army	
Director, Resource Management (J-8), Joint Chiefs of Staff		Joint	
U.S. Special Operations, Office of the Secretary of Defense		Joint	
Deputy Director for Operations, National Military Command Center, J-3, Office		Joint	
Deputy Chief of Staff for Resource Management, U.S. Army TRADOC, Fort Monroe, VA		Army	
Deputy Director, Military Personnel Management, Office of the Deputy Chief of Staff for Personnel, U.S. Army			

Table 3 Page 2

U.S. Army One- and Two-Star Billets, Position Types, and Report-
ing Channels Represented in the ARI subject sample

ONE-STAR BILLETS (Continued)	BILLET TYPE	POSITION TYPE	REPORTING CHANNELS
Technical Specialization Positions			
Commanding General, U.S. Army Intelligence Agency, Office of the Deputy Chief of Staff, Intelligence	None	Army	Single
Commander, Defense General Supply Center, DLA, Richmond, VA	Installation	Joint	Multiple
Chief, Center of Military History, Washington, DC	None	Army	Single
Director, Intelligence, J-2, Forces Command, Fort McPherson, GA	"	Joint	"
Training and Development Positions			
Assistant Deputy Chief of Staff, Training, U.S. Army TRADOC	None	Army	Single
Commanding General, 4th Reserve Officer Training Corps Region, Fort Lewis, WA	"	"	"
Assistant Commandant, U.S. Army Armor School, Fort Knox, KY	"	"	"
Commanding General, U.S. Army Combined Arms Training Activity, Fort Leavenworth, KS	"	"	"
Commanding General, 2nd Reserve Officer Training Corps Region, Fort Knox, KY	"	"	"
Deputy Chief of Staff for Doctrine, U.S. Army Training and Doctrine Command, Fort Monroe, VA	"	"	"
Commanding General, 7th Army Training Command, USAREUR and Seventh Army	Installation	"	"
Commanding General, U.S. Army John F. Kennedy Special Warfare Center, Fort Bragg, NC	Non-Installation	Joint	Multiple
Special Billets			
Commanding General, United States Army Troop Support Agency, Fort Lewis, VA	None	Army	Single
Director, International Negotiations, Joint Chiefs of Staff	"	Joint	Multiple

17

Table 3 Page 3

U.S. Army One- and Two-Star Billets, Position Types, and Reporting Channels Represented in the ARI Subject Sample

TWO-STAR BILLETS	BILLET TYPE	POSITION TYPE	REPORTING CHANNELS
Command and Field Positions			
Commanding General, 7th Infantry Division (Light) and Fort Ord, Fort Ord, CA	Installation	Army	Single
Commanding General, 32nd Air Defense Command, USAREUR and Seventh Army	Installation	•	Multiple
Commanding General, 82nd Airborne Division, Fort Bragg, NC	Non-Installation	•	Single
Commanding General, 3rd Infantry Division, (Mech), USAREUR and Seventh Army	Installation	•	•
Commanding General, 2nd Armored Division, Fort Hood, TX	Non-Installation	•	•
Commanding General, 9th Infantry (Motorized), Fort Lewis, WA	Non-Installation	•	•
Commanding General, 1st Cavalry Division, Fort Hood, TX	Non-Installation	•	•
Staff Positions			
Director, Operational Plans and Interoperability Directorate (J-7), Joint Chiefs of Staff	None	Joint	Multiple
Deputy Inspector General for Investigations, Assistant, Training and Information , Office Secretary of the Army	•	Army	Single
Chief, Legislative Liaison Office, Office of the Secretary of the Army	•	•	Multiple
Chief of Staff, U.S. Army Training and Doctrine Command, Fort Monroe, VA	•	•	Single
Chief of Staff, U.S. Army Europe	•	•	•
Advisor on NATO Affairs/Principal Director (International Security Policy), Office Secretary of Defense	•	Joint	Multiple
Assistant Deputy Chief, Operations (Joint Affairs), Director, Strategy, Plans, and Policy, Office of Deputy Chief of Staff, Operations, Army Staff	•	Joint	Multiple
Director of Operations, Readiness & Mobilization, Office of Deputy Chief of Staff, Operations, Army Staff	•	Army	Single
Director, Operations, Deputy Joint Chief for Operations Directorate, U.S. Forces Command	•	Joint	•
Deputy Commander-in-Chief, Chief of Staff, U.S. Forces Command	•	Joint	•
Training and Development Positions			
Deputy Commanding General, Combat Developments, U.S. Army Combined Arms Command, Fort Leavenworth, KS	None	Army	Single
Deputy Commandant, U.S. Army Command and General Staff College, Fort Leavenworth , KS	•	Army	Single
Commanding General, U.S. Army Armor Center and Fort Knox, Commandant, U.S. Army Armor School, Fort Knox, KY	Installation	Army	Single

Interview Protocol

The interview protocol was designed to gather data on a range of factors hypothesized by Stratified Systems Theory to be involved in senior level leader performance and development. It contained questions about organizational structure and the behavioral aspects of job performance, grouped into four areas: principal duties and functions, frame of reference, experience in present position, and professional development. More specifically, the protocol was designed to capture a bro.. description of the important tasks of the Brigadier and Major Generals' jobs in interpersonal, resource, political, and communication areas.

Two types of information were collected. The first was related to the specific requirements and tasks of the incumbent's current position, using questions framed to gather data on factors postulated to be involved in level-specific differences in both organizational requirements and cognitive capability. They included:

- key responsibilities and functions

- organizational structure and resourcing

- principal influence on work accomplishment

- key relationships

- successful and unsuccessful outcomes

The second category of questions was focused on the developmental needs of future senior leaders and how the U. S. Army War College can help in this preparation.

Interviewing Procedure

Initial data regarding performance requirements were gathered through in-depth structured interviews. Two hours were planned for each of the interviews. The actual durations ranged from one to over three hours, with the average being about 90 minutes. In the initial data-gathering, interviews were audio-recorded and transcribed verbatim. To protect anonymity, identification numbers were assigned to each individual record.

Experimental Design and Data Analysis

A central hypothesis was that One- and Two-star positions would fit the criteria for the senior leader level in terms of the nature of the work and the degree of complexity postulated by the theory (Jaques, 1976). However, identifiable differences were expected between the two levels in the factors held to contribute to complexity. In addition, as with the research on

19

Three- and Four-star General Officer performance (Harris & Lucas, in preparation), the senior leader domain seemed likely to reveal position-specific differences within levels, depending on whether the position had Army-only, Joint, or Allied responsibilities. This type of detailed understanding would be necessary to facilitate the structuring of a systematic development program for the Army leaders who would fill these positions in the future.

A preliminary analysis of the data defined broad categories of requisite performance, a number of which were the same as those previously defined for the Three- and Four-star General Officers. Then, an in-depth three-step analysis of the One- and Two-star performance requirements was conducted:

1. organizational mission and position requirements were defined and positions analyzed;

2. the interview responses were analyzed for appropriate placement in one of the identified response categories; and,

3. developmental activities were compared to those described in the model.

A detailed analysis of the interview data was then conducted to describe the senior-level positions in terms of organizational function, the specific knowledge and skills reported as requisite to accomplishing the work, and the developmental events and processes that had been instrumental in the careers of these officers. During the analysis, the transcripts were reconstructed to conform to the protocol.

First, organizational mission and position requirements were defined through document review and the experience of one of the authors. The positions were then analyzed in relationship to the mission and to the functions defined by the model as necessary to mission accomplishment. The results of this analysis, together with the concepts of level-specific requirements from the theory, provided the framework for the hypotheses to be tested in the content analysis of interview responses.

Second, at the outset of the content analysis phase, hypotheses were formed to test the interview responses against theoretical predictions concerning reported requisite skills and developmental patterns, given the nature of the position (e.g., assignments and reporting relationships, time frames for decisions). Interview responses were analyzed, using the variables shown in Table 4. The categorical responses were defined by the protocol. In addition, the original tapes and transcripts were reviewed again.

The method of content analysis utilized in this research is in essence a dichotomous measure. Either a General Officer spoke

20

to a skill or function, for example, planning, or he did not. The frequency with which he spoke to the content area was <u>not</u> tallied. Rather, having once spoken to a relevant topic or content area, a given General Officer -- whether he spoke once or ten times -- was included in the proportion of the sample who did so.

Finally, developmental activities identified through content analysis of the interview responses were compared to those described in the model and in other theories of cognitive development.

A comparison of the content categories used in this research and those used in the previous research on Three- and Four-star assignments (Harris & Lucas, in preparation) also appears in Table 4. Notable is the greater emphasis in the present research on cognitive and communication skills.

TABLE 4

Content Categories Used in Two Cross-Sectional Studies of U.S. Army General Officer Performance Requirements

Three- and Four-star General Officers (Harris and Lucas, 1991)	One- and Two-star General Officers (Lucas and Markessini, 1992)
Nature of Work at Three- and Four-star Levels*	**Nature of Work at One- and Two-star Levels***
Positions and Reporting Channels*	Positions and Reporting Channels*
Time Span of Work	---**
Requisite Knowledge and Skills*	**Requisite Knowledge and Skills***
	Cognitive Skills
	Mental Mapping
	External Perspective*
Multinational Knowledge*	Joint and Combined Relationships*
Joint and Unified Relationships*	Systems Understanding*
Requirements of the Total Army System*	Shared Frames of Reference*
Consensus Building/Building Collegial	Problem Management
Relationships*	
Envisioning/Anticipating*	Planning/Envisioning*
	Cognitive Skills/Personality Traits
	Dealing with Uncertainty/Risk Taking*
	Communication/Interpersonal Skills
	Networking*
	Consensus Building*
	Feedback
	Use of Communication Technology
	Resources Management
	Personnel
	Materiel
Other Requisite Skills*	
Abstracts/Concepts/Synthesizing	
Establishing Values/Climate Setting	
Self-evaluation/Error Checking	
Sharing Frames of Reference*	
Dealing with Uncertainty/Risk Taking*	
Development Processes*	**Development Practises and Needs***
Military Education*	Military and Civilian Education^**
Civilian Education*	On-the-Job Preparation of Subordinates
Assignments	^
Tactical Command as Preparation	^

---

* Indicates shared items or those variables treated in the companion report
** See Planning/Envisioning, pp 29-33, for an explanation of this omission
^ Access to GOMO denied

RESULTS AND DISCUSSION

The results of the analysis are presented in three sections. First is a description of the nature of One- and Two- star work, and its relationship to organizational mission in terms of assignments and reporting channels. The second section identifies the requisite knowledge and skills for senior leadership roles, as determined by the content analysis of interview responses. These are compared to those advanced by the Stratified Systems Theory. The variables considered are: <u>cognitive skills</u> (mapping ability, problem management, and planning); <u>cognitive skills/personality traits</u>; <u>communication/interpersonal skills</u>; and, <u>resources management</u>. Finally, the development practices and needs of One- and Two-star General Officers are summarized.

Extended quotes are used in support of the reported findings. It is important to note that all quotes included in support of the results represent the central thrust of opinion expressed by the General Officers interviewed; they do <u>not</u> represent extremes, either the best or the worst skill levels expressed.

Wherever possible, comparisons will be drawn to the companion report on U. S. Army Three- and Four-star assignments (Harris & Lucas, in preparation) in order to enhance the developmental nature of both works and to compose a developmental profile encompassing all U. S. Army General Officer ranks.

Nature of One- and Two-Star Level Work

For the purposes of this research, the mission of the Army was accepted as given in statutes and regulations that define the Army as a civilian-led provisioning force with Joint war-fighting responsibilities. By this definition, the Army, together with the other Services, fulfills its mission by provisioning the Unified and Specified Commands with trained troops and materiel for war-fighting. Based on this mission, its implications for integrated planning and actions, and Stratified Systems Theory, a number of hypotheses were formulated.

First, it had been found in the earlier work that the most complex Army executive leader tasks were in positions that cross Service lines and involve complex reporting relationships. However, it was expected that complexity of this nature would not be the rule at the senior level. This is explained by the nature of the organization of the Defense Department:

- Four-star Generals are CINCs. They command multi-service organizations, Combined or Unified Commands.

- Three- and at times Four-star Generals are component commanders (Army commanders) supporting CINCs.

23

. Two-star Generals are commanders of Army divisions. Although they could be the Army component commander in a Joint Task Force operation, they normally command a subordinate organization and deal directly with their respective senior Army commanders.

. One- and Two-star Generals are expected to have a single service orientation, looking only to the other services for direct and indirect support, which is obtained by the superior Army component Commander.

Thus, for example, reporting channels for the One- and Two-star Generals were expected to be less complex -- ones in which the General Officers more frequently reported directly to a more senior officer of the larger organization, in contrast to the findings at the executive level at which incumbents had to be sensitive to differentiated reporting requirements in as many as six or more quasi-independent channels.

The results showed that the reporting channels of the One- and Two-star General Officers, though more complex than at the lower direct levels of command, are simple relative to those found for the Three- and Four-star General Officers (Harris and Lucas, 1991). Thirty-seven of 48 One-star assignments and 15 of 20 Two-star assignments were found to have a single reporting channel; only 12 and 25 percent, respectively, had dual or multiple reporting assignments, reflecting the Joint or Alliance nature of the work at those levels, as compared to 45 percent (21 of 47) of the Three-star assignments and 77 percent (10 of 13) of the Four-star assignments and (Harris & Lucas, in preparation).

Both the One- and Two-star positions fit the criteria of Stratified Systems Theory for the organizational/indirect domain. Senior leader reporting relationships do become less well de-fined, and the establishment of effective relationships are often dependent in part upon how well the total Army system is under-stood. Traditional wiring diagrams, effective at lower levels, are less descriptive of "what really occurs" at the higher leadership levels. There are a number of lateral and non-defined senior coordination and networking relations that, although unspecified as reporting channels, are in fact necessary to do the requisite work effectively.

One-star General Officers

As expected, the Brigadier Generals have more well-defined reporting channels than do more senior officers. They were generally directly responsible to a single superior. The 13 exceptions were those officers who worked in a Joint or Combined e·vironment. In those situations, there was generally a formal (.ating) chain and an informal working relationship. This was most prevalent in the Combined arena, where an Army officer may

24

be directly responsible to an officer of another nation in day-to-day operations, but is rated by a U. S. officer who might be two to three positions removed. In the Joint arena, the reporting and rating chains were likewise well-defined; however, an informal reporting relationship often existed with other officers, contemporaries and superiors, of the same service, outside of the Joint arena.

Although the reporting channels seemed to be relatively clear, with exceptions as noted, there was an awareness among most of the officers of the need to be cognizant of and compliant with the requirements of other senior officers who were not directly in the reporting chain. This distinction was most notable among the officers assigned to higher level Army or Joint staff positions. It was less apparent among those officers serving in TOE (Table of Organization and Equipment) and TDA (Table of Distribution Authorization) organizations. One officer described this relationship as an implicit requirement.

> The level of complexity increases as one moves up the leadership chain. At the direct level of leadership, it is enough to satisfy the requirements of the immediate superior and perhaps the next higher superior. At the One-star level there is an unofficial need to be aware of the requirements of much broader fields of concern, held by other General Officers not necessarily within the direct chain of command. This requirement suggests the need for total system understanding, how it operates, and how respective sub-systems are interconnected and inter-dependent. They must understand that actions taken to influence one part of the system may produce second-order effects on other components of the total system. At this level, even though one may not understand the interaction or impact it, they must be aware of the possibility and ensure that coordination is made with the broader functional areas. Failure to recognize this requirement can result in leaders of this broader arena exercising their authority by either preventing an action or event from occurring or by withholding support.

Two-Star General Officers

With few exceptions, the reporting chains for Major Generals were also well-defined. The exceptions were generally of the same type as those noted above for the One-star General Officers, that is, Joint and Combined. The billets in this group are the Director for Operational Plans and Interoperability, Joint Chiefs of Staff; the Advisor on NATO Affairs, Office of the Secretary of Defense; and the Assistant Deputy Chief, Operations (Joint Affairs), Office of the Deputy Chief of Staff for Operations. The Major Generals serving on the Army staff perceive dual or

multiple reporting channels, which in fact exist (Table 3). Those serving on the Secretariat, such as the Chief of Public Affairs, report directly to the Secretary, but maintain a day-to-day reporting channel to the Chief, Vice Chief, or Director of the Army Staff.

Officers assigned to TOE or TDA positions may or may not have installation as well as organizational responsibilities, and thus dual reporting channels. Those officers having dual responsibility must deal with day-to-day operation of the organization as well as the day-to-day running of the installation. The Commanding General of Fort Campbell and the 101st Airborne Division operationally reports to the Commanding General, 18th Airborne Corps and to the Commanding General U. S. Forces Command for the maintenance of the installation. By contrast, a division commander located at Fort Hood, home of the Third U. S. Army Corps, has only organizational operational requirements and a single reporting channel. In addition to the dual reporting responsibilities, the level of complexity in positions with both organizational and installation responsibility is far greater than for those with organizational responsibilities alone. Their incumbents are responsible for construction and maintenance of infrastructure as well as the operational readiness of their organizations. Figure 2 shows the greater complexity of Three- and Four-star General Officer reporting channels.

Requisite Knowledge and Skills

The following sections describe those skills and knowledges thought requisite to successful military executive performance and most frequently discussed by the One- and Two-star General Officers interviewed. They are grouped into four categories: cognitive skills, cognitive skills/personality traits, communication/interpersonal skills, and resources management. Table 5 contains a summary of the proportions of U. S. Army One- and Two-star Generals citing requisite knowledge and skills. Wherever possible, proportions of U. S. Army Three- and Four-star Generals citing the same or comparable knowledge and skills are offered.

Cognitive Skills

The cognitive skills thought requisite to successful military executive performance are mental mapping, problem management, and planning/envisioning. They are given below in that order.

Mental Mapping. In this analysis, mental mapping is referenced as "shared frames of reference," "systems understanding," "Joint and Combined operations," and "external perspective." Considered in that order, they may be taken to delineate a developmental progression in the depth, and scope (in time captured) of an individual's frame of reference, or "mental map."

26

Figure 2. Three- and four-star general officer reporting channels
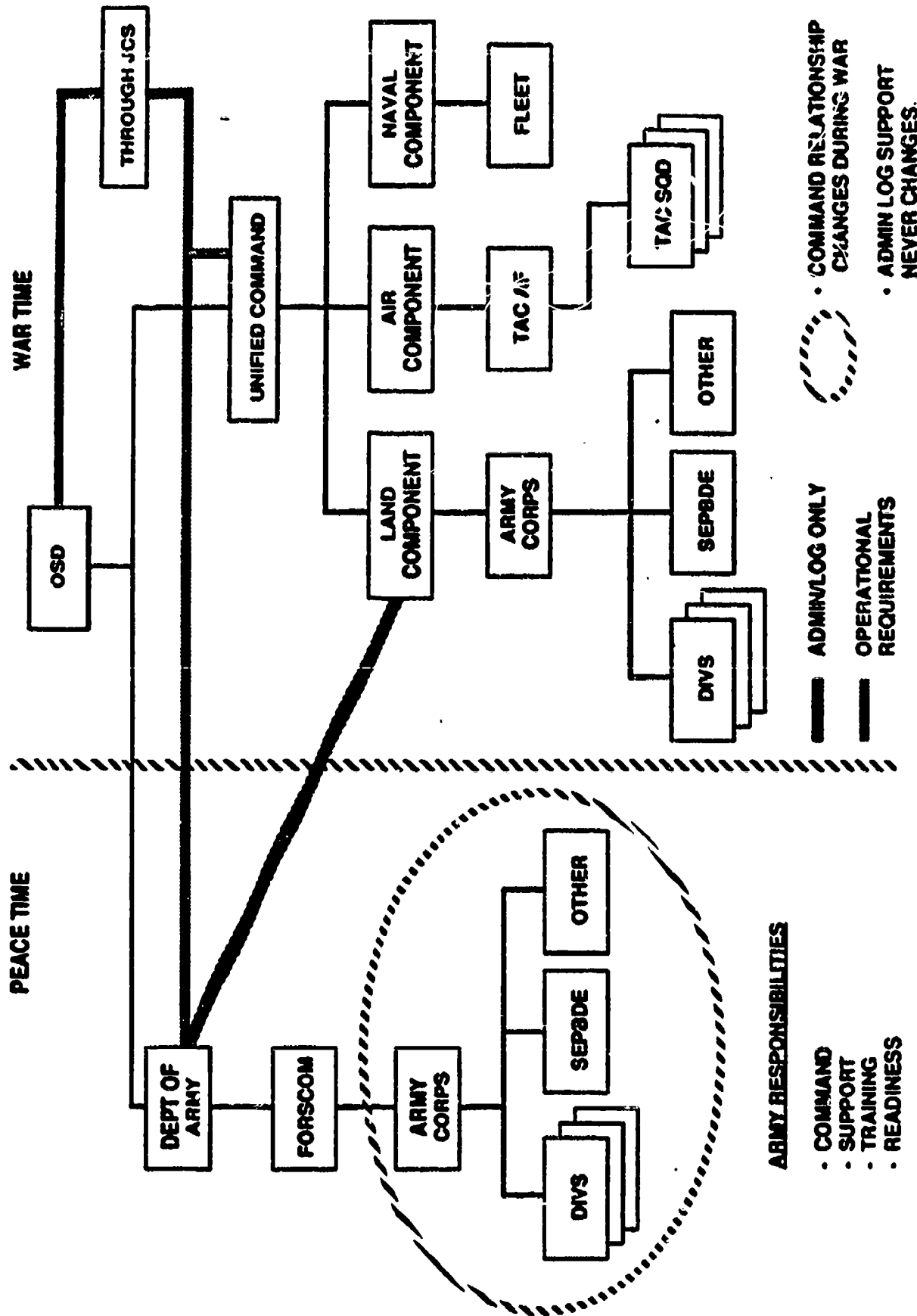
This figure is inspired by one that appears in Special text: executive leadership, published at the U.S. Army War College.

Shared Frames of Reference. Twenty-four percent of the sample (11 % of the One-stars and 40% of the Two-stars) cited shared frames of reference as a necessary ability. It was often referenced as a need to understand "where one's superior is coming from," to include understanding of the context being used by officers two levels higher. This requires ability to access their time, but more importantly, to ask questions that will elicit the information needed to enable thinking as they do. It is thinking, reasoning, conceptualizing above one's own position in order to put the right "spin" on the context. It is knowing why a position is taken by a superior even though it may appear at first glance not to be "right." It is understanding when it is time to shoot a "silver bullet." Obviously, sharing a frame of reference in this manner entails an enormous practice-rehearsal effect. The concept seemed to be better understood by the Major Generals than by the Brigadier Generals.

> You have your neck stuck out sometimes and you have to
> have the self-confidence and the knowledge of where
> your boss is coming from. And you have to have the
> boss's total confidence that he is comfortable with
> what the hell you're doing. That means you have to
> have time with the boss, so that you know where he is
> coming from and you're back-briefing him on what you're
> doing. That is standard leadership, but it is awfully
> important, the higher you go, where you are into these
> kinds of jobs.

Systems Understanding. Results from the analysis of interviews of Lieutenant Generals and Generals demonstrate a decreased concentration on internal process and system integration. The focus, at the executive level, is on how the Army system fits within the total Department of Defense (DoD) framework, and, for some, into the broader international arena. It was expected that Brigadier and Major Generals would focus more strongly on the internal process of their organizations than on a need for broader understanding of the total Army system and the integration of its components.

Over 80% of the One- and Two-star General Officers described in detail the process of how their organization operated and viewed maintaining and improving those processes as one of their primary functions. Well over one half of the above officers described system interactivity within the context of their organization. They spoke of the interrelationships among the human resources, base support, service support, and operational systems within the context of the organization. However, less than 15% discussed the total Army system. The most commonly expressed opinions on this subject addressed the relationship between the Active and Reserve Forces. Yet, most expressed a lack of understanding of the operational process of the Reserve Forces and of the components of that system. Twenty-one offi-

cers, 28%, spontaneously acknowledged a need to develop a better understanding of the total Army; notably, the relationships among the Training and Doctrine Command (TRADOC), the Army Materiel Command (AMC), and the process of provisioning the force.

Joint and Combined Operations. Fifty percent of the sample indicated that knowledge of Joint (Task Force and Unified Commands) and Combined Operations was a requisite General Officer skill, even though it did not directly impact on their current positions. Experience with, depth of knowledge about, and understanding of Unified and Combined Commands (as opposed to experience with, knowledge about, and understanding of the provisioning services) expressed by both ranks were less than anticipated.

Those who had served in a Joint position or attended a non-Army service school expressed the value of that experience in terms of their greater understanding of the need to integrate the services in the Joint context in order to better accomplish assigned missions. They also indicated that the experience provided them with a broader understanding of their own service.

As I've learned more about serving in Joint assignments, I discovered I still have to think like a soldier, but make sure that when I'm in the business of formulating a position, decision, or action, that I have the best representation from all of the services. This will result in a better product.

A large number (46%) of the respondents indicated that greater emphasis by the service schools must be placed on the operational level of war. In this area, development was seen as needed across the spectrum of associated issues: synchronizing logistics, combat multipliers, military and political objectives.

External Perspective. Fifty-three percent of the sample (40% of the One-star Generals and 60% of the Two-star Generals) expressed the need to understand the external operating environment in relationship to how it impacts present and future operational requirements. However, officers occupying similar positions, such as Artillery Group Commanders and ROTC Regional Commanders, diverged widely in their responses. In several such pairings, one of the officers interviewed would detail the importance of considering the impact of the external environment in relation to accomplishing assigned responsibilities, while the other only discussed internal operations of the organization, with no reference to external factors.

The wide divergence in external perspective does not appear to be related to interviewing styles; in most cases, the same person interviewed both officers. Rather, the divergence may

reflect the degree to which the officers have fully made the transition from the direct to the indirect level of leadership. It is interesting to note that officers with an external perspective had either experience in a Joint or Combined position or had attended a non-Army service school at either the Command and General Staff College or Senior Service School levels.

Problem Management. According to the theory (Jacobs and Jaques 1990b), at the executive level, problem management is developing a workable course of action to deal with problems that are difficult to imagine, and to manage the outcome over time so that they will be successfully resolved. The process may lead to the solution of a number of smaller problems along the way. It involves separating out components, applying past experiences, identifying and creating patterns, discarding non-usable data, understanding second- and third-order effects, maintaining a relatively high degree of flexibility, and knowing what is an acceptable outcome.

Although it was not anticipated that the One- and Two-star General Officers would demonstrate the executive level ability of problem management, it was hypothesized that they would have begun to think in terms of long-range solutions to difficult problems that require a considerable amount of management to bring about desired outcomes. However, most (75%) of the respondents at both levels (80% and 55% of the Brigadier and Major Generals respectively) viewed problem management as involving the development of alternative courses of action, assessing probability of success, and pursing the selected course of action.

Only a small percentage of the sample (14%, all Major Generals) indicated an understanding or appreciation of the process of problem management. Those officers assigned to Army. Joint, or Combined staff positions spoke of decision making and problem management as two distinct activities. The first involved the selection of a course of action based upon a probabilistic outcome, as discussed above. The second involved managing the problem towards the desired outcome -- making adjustments, modifying the initial approach, and discarding alternatives that inhibited or slowed movement toward the desired outcomes. This is very close to the characterization reported in Jacobs and Jaques (1990b).

This differentiation of decision making and problem management appears to be a major transitional element in the acquisition of the skills of indirect leadership. Most past training and work experiences at the direct level have been based upon developing short-term solutions, and upon "decision making" on relatively well structured problems by formalistic generation of alternative courses of actions, and execution of the alternatives with the greatest probability of success. Long-term, ill-defined problems for which it is difficult to envision desired outcomes

are not frequently encountered at the lower levels. More developmental experience than is now available is probably necessary to produce perspective needed to deal with this type of problem.

Planning/Envisioning. One of the key executive functions described by Stratified Systems Theory is providing "vision." This is a complex process of creating long-term organizational goals and describing them in ways that permit realistic planning for their attainment to occur. At the executive level, these goals may be very far-reaching, and must reflect consideration of the organization's relationship to a changing environment. It thus was anticipated that Brigadier and Major Generals would be dealing in longer time frames than officers at the direct level. On the basis of the theory, time spans of five years and beyond were expected.

Interview responses in this sample expressed this requisite skill as ability to envision the future, to anticipate change, to establish long-term goals, and to shape the future environment.

First, a higher percentage of the Two-star Generals, 40%, reported the importance of long-term planning/envisioning than did the One-star Generals, 25%. These percentages are compared in Figure 3 to those found for the Three- and Four-star Generals (Harris and Lucas, in preparation).

> We are looking into the future. I have a strategic group looking at that tie-in with the Army Plan. Part of what we are doing is brainstorming out to the year 2010. You know by then the work force may be mostly working from home. We must project and anticipate how our actions will impact on the work place and the environment. For our work, environmental considerations are very important. Sometime ago a decision was made to store materials in underground barrels. Now, the barrels have deteriorated and we must now spend millions of dollars on clean up to make the land reusable. We should have anticipated what would have happened. In the future we must do better.

Second, like the Three-star General Officers, the One- and Two-star Generals reported a broad range of planning time frames. Nevertheless, the near term, the operational year, dominated the rhetoric of the majority of One- and Two-star Generals and was clearly their primary focus; planning beyond that period was largely a reflection of the budget cycle. While the Lieutenant Generals and Generals were well aware of the constraints imposed by the system, they nevertheless spoke to their interest in and ability to operate in longer time frames. So, while many plans were framed in terms of the budget cycle, the chains of cause-and-effect emanating from those decisions were seen to extend beyond that time frame in actuality.

31

KEY

FOUR-STAR GO ☐
THREE-STAR GO ■
TWO-STAR GO ▨
ONE-STAR GO ▨

4-STAR	87.5
3-STAR	63.6
2-STAR	40.0
1-STAR	25.0

LONG TERM PLANNING/ENVISIONING

0   10   20   30   40   50   60   70   80   90   100
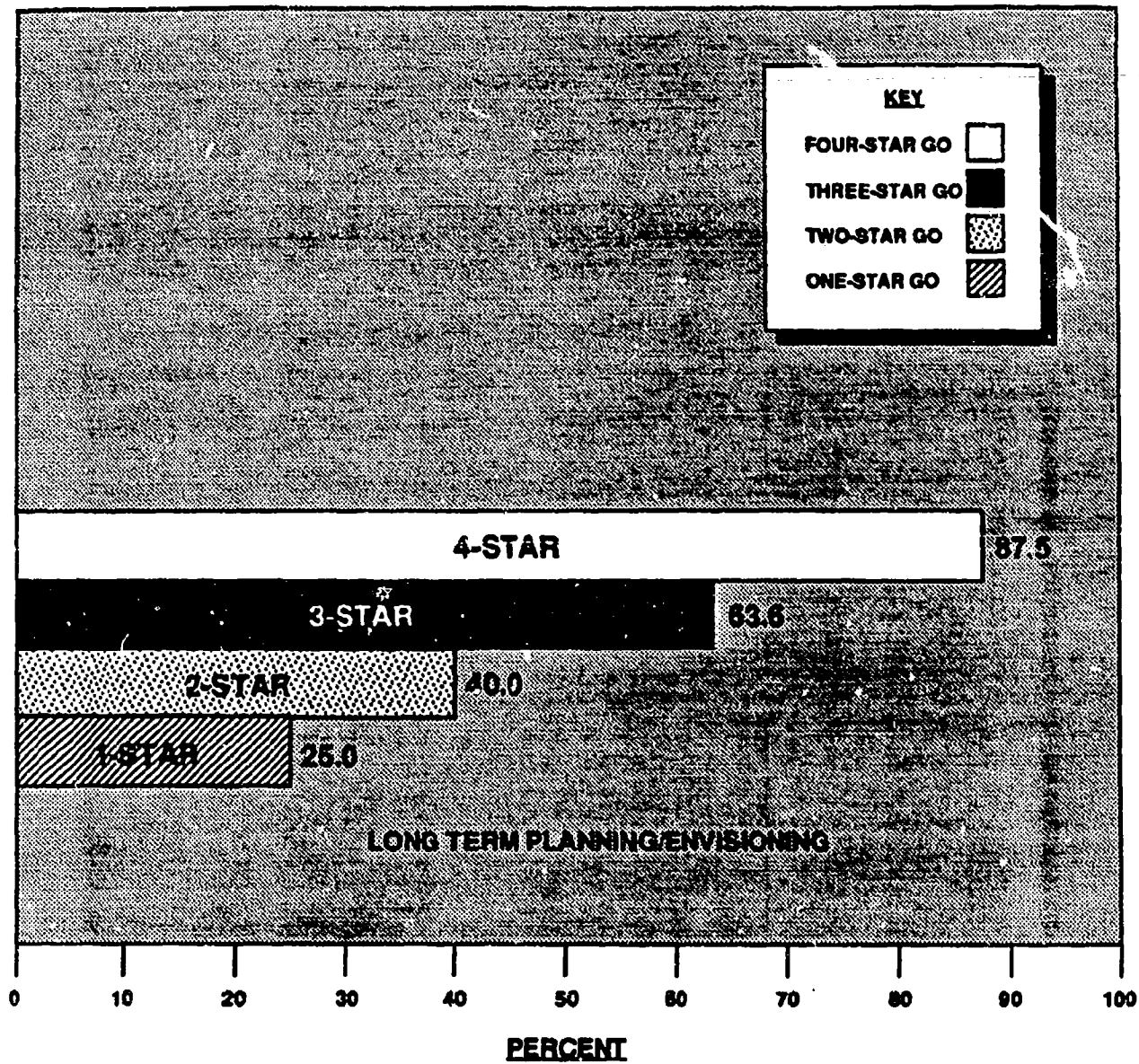
PERCENT

Figure 3. Percentages of one-, two, three-, and four star U.S. Army generals reporting the importance of planning
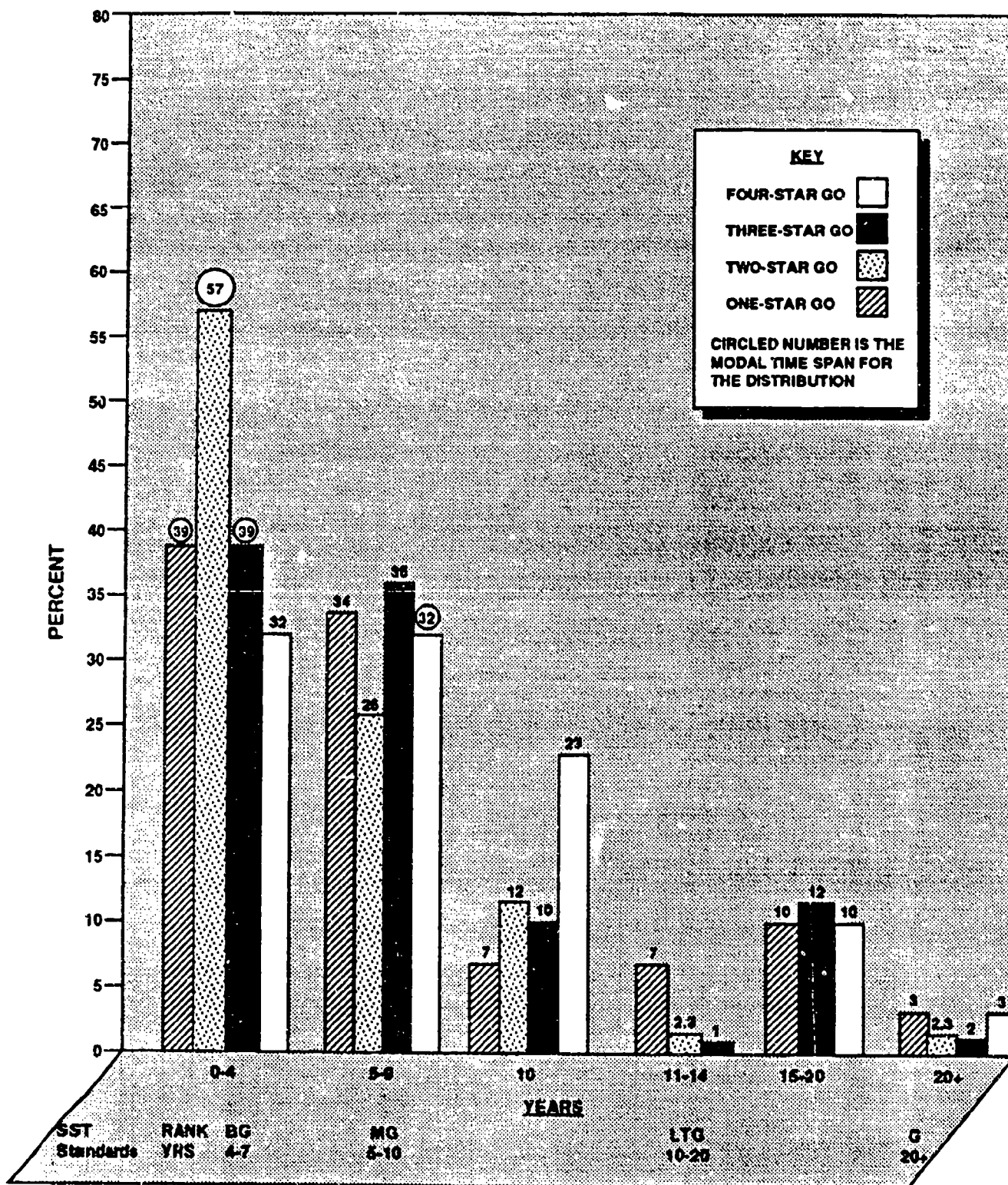
32

Figure 4. Reported time frame for planning for one-, two-, three-, and four-star U.S. Army general officers, with the stratified systems theoretical standard

A majority of the subjects (65%) reported working in the very near term, from day-to-day operations, often in a reactionary mode to operational requirements, to only a few weeks into the future. Those with assignments to operational units in Europe, and to some extent in CONUS, planned around the major training exercise events, typically on a yearly basis. Those events were considered the one activity that was least subject to change. However, while recognizing that day-to-day operations required a large part of their time, the majority of those interviewed voiced the desire to be able to work further into the future, at least two to three years. Most planning beyond the near term, into the five- to eight-year period, was in response to POM cycle requirements. Planning in the extended period was an unusual response, most often to a special requirement, rather than a behavioral pattern.

A small minority, less than 8%, of the One- and Two-star Generals, reported planning well into the future, as much as 10 to 15 years. Of this small group, most were in non-Army positions.

There was a noticeable difference between the One- and Two-star Generals reporting time spans for planning . The latter reported a multi-level process in their work. While long-term planning was required in dealing with POM cycle requirements, short-term operational requirements were a more frequent facet of their work. The One-star Generals focused nearly totally on day-to-day operational requirements. The exceptions were those One-star Generals occupying positions of command or having installation responsibilities. Among the Two-star command position assignments, the time span for planning differed between those with only organizational responsibilities and those with both organization and installation functions. The latter group stressed the need for planning beyond the POM cycle, especially in the area of installation infrastructure development and improvements.

For the purpose of direct comparison, results on time frames of planning for Three- and Four-star assignments (Markessini, in press) are aggregated here with those from the present research. The time spans of work reported by One-, Two-, Three-, and Four-star General Officers are presented in Figure 4, with the caveat that two different constructs may be operative and that interview procedures used in the earlier data collection appears to have confounded the two. (More certain evidence on this point will forthcoming from further analysis of the data base.) For the One- and Two-star Generals, proportions are the number of responses made in a given planning time frame category (Appendix B) as opposed, for the Three- and Four-star Generals, to the number of General Officers in a given time span category. Most apparent from Figure 4 is the dispersion among the Lieutenant Generals on this variable.

34

TABLE 5

U.S. Army General Officers Citing Term of Years for Planning: Means and Modes					
		Task Requirements			Performance Capability
GO Rank	% Responding	Mean	Primary Mode	Secondary Mode	Mean
Four-stars	63	6.95	5	10	19.0
Three-stars	71	6.63	5	1	11.5
Two-stars	70	4.71	5; 1 (tied)	2	8.6
One-stars	50	6.72	5	2	11.2

The two different constructs that may be at play here are: (a) the time span needed for work or, more specifically, the accomplishment of a plan's objectives, with or without the guidance of the plan's author; and, (b) the "time horizon" with which one can envision or anticipate events in the future. The latter may encompass the former. For example, one could project well beyond the <u>actual</u> time frame for a plan expressed and slated for implementation. Moreover and most importantly, an executive could implement a predecessor's plan ably without any requirement whatsoever to envision or forecast future events or conditions. Both constructs appear to demand mental mapping, in order to encompass the processing of multiple cause and effect relationships as explained in Stratified Systems Theory. What is interesting to note in this regard is the shift in the Stratified Systems Theory from "time span of work" (Jaques, 1976) to "time frame," still tied to work but with a greater premium on envisioning the future (Jaques, 1985 and 1990).

Because these results are checkered, yet critical to empirical confirmation of Stratified Systems Theory, a post hoc analysis was performed on the data using a more refined method of content analysis. All General Officer comments speaking to the time frame of planning used, whether their own or those of others, were extracted and the number of comments tallied for each. Fifty percent (21/42) of the Brigadier Generals and seventy percent (14/20) of the Major Generals commented on the time frames for planning with which they had direct or indirect

35

experience. The modal and mean planning time frames for the General Officers are presented in Table 5. Absolute frequencies, officer by officer, are tabled in Appendix B.

The mean planning time frame reported by and for the Brigadier Generals is that predicted by the Jaques theory, but the mean planning time frame reported by and for the Major Generals falls below the theoretical prediction of five to ten years; the means for the Three- and Four-star Generals are even further below the theoretical prediction. The modal responses all fall at five years. What appeared to constrain the planning outlook of these General Officers is the five year POM, a critical task requirement for them all.

On that hypothesis, a third post hoc analysis was performed. Only the maximum time frames at which each General Officer claimed he worked were computed, on the thesis that the stated maximum would represent individual performance capability as opposed to the task requirements of particular assignments. The means derived on this basis are higher and more varied. In addition, for the Four-, Three-, and Two-stars, the means are indeed close to those predicted by Stratified Systems Theory -- more than 20 years, more than ten years, and more than five years, respectively. Only the Brigadier Generals violate the theoretical prediction. The cohort of Brigadier Generals from which the sample was drawn may be exceptional for any number of possible reasons, or the sample itself may have been unrepresentative. Possibly, the proportion itself, (50%) of the sample, speaking to the issue -- substantially smaller than those at the higher ranks, which were virtual two-thirds majorities -- was unrepresentative of the sample as a whole. More probably, a high achieving group spoke out. Three of the Brigadier Generals were in billets that demanded they function at a long planning outreach. The billets are Chief, Center of Military History (maximum reported time frame, 30 years); Commanding General, 7th Army Training Command (maximum reported time frame, 12 years); and, the Commanding General, U. S. Army Troop Agency (maximum 20 years). See their comments (Appendix B). If the scores, which are outliers in the distribution, are excluded, the performance capability mean is 9.4.

In sum, the transition to the indirect level of leadership, and the accompanying need for working with longer time spans for planning, appears to be difficult to achieve. For twenty or more years, prior to selection to General Officer, many of these officers worked day-to-day operations, planning only weeks, months, or a few years at most into the future. Many had also lived in an environment that required reactive response to last minute changes. They consequently developed the ability to react, to be flexible, and to adjust schedules accordingly; most were not involved up to and through their senior field grade service in the formulation and execution of plans extending

36

beyond one to two years. On the other hand, it does appear that many or most have developed performance capability that exceeds their positional task requirements. This is a significant observation.

Cognitive Skills/Personality Traits

Dispositional traits as measured by personality tests may well figure into the character formation inherent in the professional development of U. S. Army Officers. And these may configure with certain cognitive skills. One such instance is the ability to take risks as a way to deal with, or in the face of, uncertainty.

Dealing with Uncertainty/Risk Taking. A set of responses noted facets of leadership that appear to involve an interaction of cognitive ability and personal values. Risk taking in the face of uncert inty was described in a number of ways: for example, dealing with uncertainty, being willing to innovate, or taking risks. This ability would seem to be related to both the cognitive ability to tolerate cognitive dissonance, complexity, and ambiguity and to the personality trait of self-confidence.

About 25% of the officers interviewed referenced this characteristic.

> You are never going to have all the 't's' crossed.
> That is where judgement comes in. You take the best
> cut you can with the best information. I am a firm
> believer that if you are in the policy business, it
> doesn't do a damn bit of good to have a paper that is
> 100% right but late, because you will miss the boat.
> It is much better tc get your oar in the water even if
> it is 75% solid, to make the impact on the decision,
> and even delay the decision by what you are putting on
> the table. The train moves fast in this town. That is
> where military judgement comes in and forcing yourself
> in the decision process.

The noted proportion contrasts to the much higher proportion (53.7%) of the Three- and Four- star Generals who referenced this characteristic.

Control. The direct face-to-face influence that these officers had relied upon at lower ranks as a means of directing subordinate efforts was said to be hard to achieve at One- and Two-star levels. A large percentage (70%) of the officers interviewed pronounced this to be a difficult transition.

When it is no longer possible to directly influence the action of subordinates, there is a sense of lack of control and increased risk. At the lower levels of leadership, it is possi-

37

ble to know nearly everything that is going on within the organization and there is a tendency for leaders to withhold decision authority, to micro-manage. At the indirect level, it is no longer possible to "know all." To be successful, it is necessary to delegate responsibility and accountability. Many of the officers expressed a great deal of discomfort as a result.

It is likewise imperative that superiors allow their subordinate General Officers to delegate responsibility and accountability, by not holding them responsible for "knowing all." Comments by One- and Two-star officers indicate that latitude is not allowed by the executive level.

Senior Managers have forced the Army to become micromanagers, they require immense detail on each action. If a paper comes to the Commanding General (Four-star) it goes through at least five people. Many of the decisions need to be delegated. That involves risk taking on both sides. Senior Managers are not willing to take that risk.

Communication/Interpersonal Skills

Nearly all officers interviewed (90%) described the importance of effective communication and interpersonal skills in their positions. No less than seven very different aspects of these skills were cited. The most often referenced were networking, consensus building, getting feedback, and using communication technology. Others were: effective interface with the external environment; cross-cultural communication, including translation and interpretation; and precision in verbal communication.

Networking. Most frequently mentioned, by 90 percent of the General Officers, was the development of effective networks. Networking was consistently mentioned by those occupying Department of Defense (DoD), Department of the Army (DA), and Joint positions as one of the most important elements that enabled them to accomplish their work. Networking was described as knowing whom to contact to get needed reliable information in a timely manner.

Those officers serving on the DoD, DA, or Joint staffs spoke most frequently of the requirement to translate and interpret organizational policies and directives from higher headquarters for themselves and subordinates. Involved in this process is an interaction of communication skill, cognitive ability, shared frames of reference, and personal values. The process requires working with subordinates to ensure that they fully understand action requirements and the policies and directives impacting on whatever specific problems need resolution. It requires "thinking through" action requirements as they relate to the total

38

system and impact up and down the chain. Consideration of second- and third-order effects is critical.

Consensus Building. Consensus building was seen as a requirement in both the internal and external environment. In the internal environment, about 70% of the officers spoke of the need to "sell" your program or to gain consensus for the program. "Selling" was frequently described among officers in high level staff positions, such as at TRADOC, AMC, HQDA, OJCS, and DoD. The most frequent reference to building consensus dealt with budgetary programs. But consensus building was also seen as an essential skill in other areas. Several of the officers suggested this was a "new" experience and required some re-thinking and realignment of their past experiences.

Getting Feedback. The ability to get feedback -- information that can be used to sense and assess the effectiveness of an organization -- was noted by many. In fact, 90 percent of the General Officers cited feedback as an area that required proactive implementation of specific procedures. The procedures included deciding what information was needed and assigning specific responsibility to key individuals to focus on issue areas.

Many of the officers asserted that it was difficult to get feedback. On other than operational readiness issues, they experienced some trouble in knowing or sensing "how things actually were." Many seemed frustrated over the need to develop feedback mechanisms as well as over the "how" of doing so.

Use of Communication Technology. For approximately 35% of the officers interviewed, communication technology was an important aspect of accomplishing work. Computer conferencing, E-mail, and video conferencing technologies have added a new dimension to effective management and communications within organizations. As with the introduction of any new technology, it was generally recognized that all of the "bugs" had not been overcome and that there was a lack of understanding on how to use available technologies most effectively. Those commenting in this area recognized that the new technologies offer effective, efficient additions for senior-level communications.

In another couple of years we might just be there, including electronic publishing and everything else. You can be more productive that way, and through the medium of electronic mail, staff coordination is enhanced by a magnitude of 40 or 50 percent.

Effective Interface with the External Environment. Several respondents, Generals commanding installations and ROTC Regions, for example, noted the requirement to interface effectively with the external environment: local political leaders, the media, and

39

influential societal institutions. In the European context, those commanding U.S. installations (kasernes) spoke at length of the need to establish strong external relationships. Those within CONUS recognized that local and state political leaders possessed the capacity directly or indirectly to contribute to or detract from their near- and long-term programs. Each of the ROTC Regional Commanders, and, to a lesser extent, commanders of installations indicated that maintaining good local relationships ("selling their programs") was a major portion of their responsibilities. They also spoke of the military wife's contribution in developing and maintaining that essential relationship. The European-based officers viewed their role somewhat differently. They were less concerned with gaining program support. Their focus was establishing goodwill and a cooperative effort in local activities. Their external relationships could be likened to those effected by an ambassador.

Cross-cultural Communication. In a somewhat different context, respondents in Joint or Alliance positions placed great emphasis on the importance of effective communications at several levels. The complexity of these organizations and the lack of definitive subordination require the ability to build consensus for coordinated actions. Within Alliance Commands, although English is the spoken language, it is essential to be aware that Allied personnel do not necessarily attach the same meaning and understanding to the spoken word as do Americans. These officers also described the need to understand the cultural, political, social, and economic differences of the other nationalities within the Alliance. They suggested that multi-lingual capability would be a great benefit.

Precise Communications. The One-star Generals spoke of an increased awareness for precise communications. "The General said" phenomenon was a reality that required careful consideration of what was being spoken and how it could be interpreted or misinterpreted by overzealous subordinates.

Resources Management

The Brigadier and Major Generals interviewed have an almost universal concern with resources -- money, people, and time. The concern of the General Officers with this function was almost certainly heightened by the climate of diminishing resources in effect at the time of the interviews; However, it also reflects a perception that their own training and expertise in budgeting and personnel -- particularly civilian personnel -- matters were lacking. These are areas in which they felt ill-prepared. As an example, none of the Brigadiers fault their preparation as war fighters or in their secondary specialties. What does concern them is what they perceive as a lack of preparation in what one describes as the "soft subjects." These so-called soft subjects include dealing with civilian personnel and general management

40

skills. Notable in the interviews with the Brigadiers who are technical specialists is the overriding theme that resources are either lacking or have been decremented. How to do more with less and, more important, how to know that there is no more give were specifically cited by several of the Brigadier Generals and could be inferred from almost all of the Brigadier General interviews.

Personnel. A large number (68%) of both One- and Two-star General Officers interviewed indicated that for the first time in their careers they were managing senior grade DoD and DA civilian personnel. Most of those interviewed indicated that they did not know civilian personnel regulations and procedures well enough, or how to achieve the maximum productivity from them.

In this area, commanders with installation responsibilities and those who had no installation responsibilities differed distinctly. Those with no installation responsibilities were either commanders of tenant units or subordinate organizations of a higher-level organization, such as a division or a Corps-level installation. These commanders had a limited number of civilian personnel, mostly administrative staff support, and did not identify this as an issue. The commanders with installation responsibilities, on the other hand, described a need to learn the civilian personnel system in order to effectively execute their installation responsibilities.

Similarly to the installation commanders, the officers occupying Army-level and higher staff positions, 40% of those interviewed, reported the need to understand the civilian personnel system better. Of these, about half reported that, for the first time in their careers, not only were they responsible for managing civilian personnel, but also they in fact were directly or indirectly accountable to the civilian leadership. To be effective in such relationships, they reported a need for an increased awareness of the roles, politics, and levels of discretion associated with the senior level civilian leadership.

> Another difference I found working at this level is the requirement to understand working with civilians. Our institutions don't really prepare us for working with civilians. You have to learn how the Navy and other Services operate their civilian systems and educate yourself on the various methods of upward mobility for these people.

> For the first time in my career I've had to interface with the union. My civilian personnel officer works for me on day to day, normal union dealings, but on issues that are important enough for me to talk to the union

president, or he to me, I involve myself
directly.

Materiel. Nearly all of the General Officers assigned to
organizational positions spoke of the complexity in managing
limited available resources. For many, their current position
was the first time in which they were directly responsible for
resourcing a large organization. Most felt that they were not
fully prepared for this responsibility.

I have to be a resource integrator and make sure that
decisions made now can be supported down the road in a
few years in this constrained resource environment.

We have to operate as a business. We have to use
business principles to operate the Army, spending the
taxpayers' money.

Development Practices and Needs

The final phase of the analysis focused on development
practices and needs described by the senior Army leaders inter-
viewed during the data collection phase of the research. Unlike
the Harris and Lucas (in preparation) analysis of Three- and
Four-star developmental process, the present analysis could not
include information from the individual records on file at the
General Officers Management Office because access to them was
denied. Thus, data from the content analysis of interview
responses on military and civilian education and assignments
could not be authenticated or supplemented. As in the preceding
results sections, quotations typify the response set, and no
respondent is quoted more than once in any category.

Military and Civilian Education. Respondents were asked to
consider their preparation for their current positions, and to
indicate what additional preparation was needed and whether or
not the U.S. Army War College (AWC) could help in this area.

Responses in the area of formal schooling were disappoint-
ing. It had been hoped that a constructive critique of one's own
development process and thus of the training provided at the AWC
would be forthcoming. When asked the question about instruction
at the AWC, those who had attended the AWC provided guardedly
optimistic or mildly critical comments.

Senior schools, including the Command and General Staff
College, should be more of a reflective opportunity; a
chance to slow the train down and think about what
you've learned in your career so far. Not something
just designed to add new qualifications for our offi-
cers.

42

Negotiating skills are important. I think that you can
teach those skills. If you look at the requirements
for a lawyer, that is part of his academic curriculum,
negotiating skill. I was amazed at how many books are
written on negotiating and how many courses there are,
but they are normally associated with some other pro-
fession. We in the military expect that skill to flow
naturally out of leadership skills, or some other
things. I know of no established course that is inte-
grated as part of the [curricula at] military schools.

Most frequently the comment was: "it has been many years since I
attended the AWC, and so many recent changes have been made to
the curriculum that I am unable to comment."

On-the-Job Development of Subordinates. In contrast to the
limited expression of opinion on formal schooling, particularly
at the Senior schools, the General Officers were forthright about
their own training of subordinates. Both the One- and Two-star
Generals reported the need to develop subordinates as one of
their most important responsibilities. Those in command posi-
tions spoke of their responsibility, as the theory suggests, for
developing subordinates two levels below their position; for
example, division commanders develop battalion commanders. Each,
however, spoke of the need to be tactically and technically
competent, explaining that young officers are intelligent and
immediately detect a superior's weaknesses.

I tell this to my young commanders, 'I'm no smarter
than you are, but I've been a brigade commander before,
or a battalion commander before, so listen and draw
from this breadth of experience.' I believe my most
important job is to train my subordinate commanders. I
think it is crucial to the organization, crucial to the
Army, and crucial to success on the battlefield.

Officers serving in non-command positions indicated that
they saw as their responsibility the development of immediate
subordinates, although some time was spent developing officers
two levels lower. The rationale was that too many of the more
senior officers (immediate subordinates) have had no high-level
staff experience -- especially Joint and Alliance staff positions
-- particularly in areas such as defining a problem, questioning
assumptions, thinking through the logic for taking a position on
an action, and packaging a decision or position paper in a manner
that gives senior leaders all the information needed for a
decision or position. One officer summed up this responsibility
by referring to a noted Four-star who challenged his subordinates
by asking, "What are you trying to sell me? Give me three good
reasons why 1 should buy it."

43

TABLE 6

Proportions of U. S. Army Generals Citing Requisite Knowledge and Skills

	General Officer Rank				
	All BGs and MGs	Brigadier Generals	Major Generals	Lieutenant Generals	Generals
Requisite Knowledge and Skills					
Cognitive Skills					
<u>Mental Mapping</u>					
Shared Frames of Reference	24	11	40	*	*
Systems Understanding	80(15)[1]	60	90	42.4[1]	37.5[1]
Joint and Combined Relationships	34	25	45	54.5[2]	75.0[2]
External Perspective	53	40	60	60.6[3]	87.5[3]
<u>Problem Management</u>	75	80	55	(Not treated)	
<u>Planning/Envisioning</u>	30	25	40	63.6	87.5
Cognitive Skills/Personality Traits Dealing with Uncertainty/Risk Taking	25	19	29	53.7	
Communication/Interpersonal Skills	90	85	95		
Networking	90	85	95	(Not treated as a separate variable)	
Consensus Building	70	65	80	87.9	87.5
Feedback	90	85	95	(Not treated)	
Use Commo Technology	35	38	32	(Not treated)	
Resources Management	75	75	80	(Not treated)	
Personnel	70	67	77		
Materiel	80	77	83		

* No proportions reported, Harris and Lucas, 1991
[1] Categorized as Requirements of the Total Army System (Op Cit)
[2] Categorized as Joint and Unified Relationships (Op Cit)
[3] Categorized as multi-national knowledge (Op Cit)

Many of these General Officers spoke candidly of the need to allow subordinates to make mistakes and to learn from those mistakes. The need to allow subordinates the freedom to make mistakes was a concern also expressed by the Three- and Four-star Generals.

> I've always taken the approach that you really need to
> let people have an opportunity to have some fresh air
> and do things on their own.

The Brigadier and Major Generals acknowledged that allowing junior officers to work on their own and to make independent decisions meant a willingness to accept the risk associated with that license. The Generals in unit (command and staff) positions seemed to be more willing to accept such risk than those in higher-level staff positions. It is assumed that the latter group dealt with issues that were more readily apparent to their superiors and thus had less freedom of action.

Training and Development Needs. The interviews also contained data on stated training and development needs, though it was not possible to relate these to coursework either given or not given at AWC. Deficits were cited in the areas of the military arts, cognitive skills, communication skills, and resources management.

Military Arts. A large number (46%) of the respondents indicated that greater emphasis by the service schools must be placed on the operational level of war. In this area, development was seen as needed across the spectrum of associated issues: synchronizing logistics, combat multipliers, military and political objectives.

> It is not the maneuvering of Divisions on the battlefield,
> but rather, the complexity of the synchronization of all
> forces-- combat, logistical, and so forth-- at the right
> time at the right place to force desired results.

Cognitive Skills. With the noteworthy exception of planning, the officers spoke directly to experiences they considered useful to the development of mental mapping, problem management, and feedback.

Mental Mapping/External Perspective. Those who had served in a Joint position or attended a non-Army service school expressed the value of that experience in terms of their greater understanding of the need to integrate the services in the Joint context in order to accomplish assigned missions better. They also indicated that the experience provided them with a broader understanding of their own service. It is interesting to note that officers with an external perspective had either experience in a Joint or Combined position or had attended a non-Army

45

service school at either the Command and General Staff College or Senior Service School levels.

Problem Management. In the area of problem management, most past training and work experiences have been based upon developing short-term solutions, alternative courses of actions, and executing the course of action with the greatest probability of success. Long-term ill-defined problems for which it is difficult to envision desired outcomes are not generally considered at the lower levels. Developmental experience is necessary for development of the perspective needed to "problem manage" as defined herein.

Feedback. Most of the respondents recognized that the skills entailed in securing feedback represented an area in which they as well as their subordinates needed development.

Communication/Interpersonal Skills. While there was a fascination with communications technology and the possibilities it offers for more effective management and communication, it was generally recognized that there was a lack of understanding on how to use available communications technologies most effectively. In addition, the officers serving in Joint or Alliance billets described the need to understand the cultural, political, social, and economic differences of other nationalities, and they suggested multi-lingual capability would be a great benefit.

Resources Management. The General Officers reflect a perception that their own training and expertise in budgeting and personnel -- particularly civilian personnel -- matters were lacking. These are areas in which they feel ill-prepared. In fact, most of the General Officers felt that they were not fully prepared for the responsibility of being directly responsible for resourcing a large organization. The implication in many of their observations was that they should have learned some business principles along the way. Interestingly enough, none of the Brigadiers fault their preparation as war fighters or in their secondary specialties. What concerned them was a perceived lack of preparation in what one describes as the "soft subjects," which included dealing with civilian personnel and general management skills.

To be effective in relationships in which they were either directly or indirectly accountable to civilians or were managing civilian subordinates, these Officers reported a need for an increased awareness of the roles, politics, and levels of discretion associated with the senior level civilian leadership. Most of those interviewed indicated that they do not know civilian personnel regulations and procedures well or how to achieve the maximum productivity from civilian employees. The commanders with installation responsibilities, in particular, described a need to learn the civilian personnel system in order to effec-

46

tively execute their installation responsibilities. The Officers also indicated that their schooling had not prepared them for these relations.

An Empirical Basis for Senior War College Curriculum Adjust-ment. Because responses made to direct questioning on this point were scant and guarded, they simply did not provide a sufficient empirical basis for Senior War College curriculum adjustment. However, ample was said elsewhere to enable an informal needs analysis describing those areas in which the officers said they do poorly or have felt ill-prepared.

In brief, deficits seen in the personal and professional development of these officers -- whether or not attributable to formal education -- were

-- at the senior school level, an opportunity to reflect

-- a spectrum of capabilities at the operational level of war

-- the cognitive skills of mental mapping, problem management, and feedback learning

-- an array of communication/interpersonal skills -- in negotiating, second language acquisition and facility, cross-cultural understanding, and the use of new communication technologies, and

-- fiscal, personnel, and materiel resources management.

47

DISCUSSION

The Findings in Review

Earlier, it was predicted on the basis of the Jaques model of organizational structure that the role of the One- and Two-star Generals would be focused on the environment internal to the system over which the General Officer held sway. Thus, it was hypothesized that the knowledge and skills reported as necessary would reflect systems understanding, decision making, problem management, personnel management and team building, the development of lateral coordinating relationships, and allocation of resources. And, unlike the focus of the Three- and Four-star General Officers, the focus of these General Officers on the external environment would be limited, but required in specific positions.

The skills addressed by a two-thirds or better majority of the sample were, from most to least cited: a variety of communication and interpersonal skills, including networking and consensus building; systems understanding; resources management, particularly personnel management; and, problem management (See Table 6). Thus, although the Brigadier and Major Generals in the sample represent a wide diversity of position responsibilities, and therefore requisite knowledge and skills, this hypothesis was largely supported.

In addition, the expected developmental trend clearly held across the four General Officer ranks for which comparable data were available. The proportions of General Officers speaking to identified skills typically increased with rank. And this was so despite differences in interviewing style and experimental design.

Moreover, all but two of the developmental trends for the One- and Two-star Generals were in the expected direction; typically, more of the Two-stars spoke to the skills in question than did the One-stars. The exceptions were in the use of communication technology, a small difference within a relatively small proportion of the sample. The more striking exception was in the area of problem management in which 80 percent of the Brigadiers, but only 55 percent of the Major Generals spoke to the skill. However, only the Major Generals appreciated the change in the component skills of problem management -- from favorably evaluating a course of action and then acting upon the choice to managing several course of action over time to attain a desirable outcome. The differences in what is here termed problem management may be referenced to the distinctions among decision making, problem solution, and problem resolution (Markessini, in press).

It was hypothesized that the content categories of shared

frame of reference, systems understanding, Joint and Combined (or Unified) relationships, and external perspective, which were carried over from the Three- and Four-star research (Harris and Lucas, 1991), spelled a developmental progression in the scope of mental maps held by incumbents. Thus, the lower the General Officer rank, the greater the expression of the lower-level indices, if you will, of the mental map was expected to be, and the higher the General Officer rank , the greater the expression of the highest level indices. This was indeed the case. The overwhelming concern of the Four-star Generals was with external perspective, and that of the One-stars with understanding of the systems with which they are directly concerned. The implications of this sequence for career development should be obvious.

Similarly, the analysis found the expected progression in the frequency with which General Officers addressed planning and risk taking -- to which the Three- and Four-stars assigned far more weight -- and consensus building, which was part of a larger shift in the way in which decisions were said to be made by successively higher ranks (Markessini, in press). Furthermore, the data point to a decided break between the One- and Two-star Generals, on the one hand, and the Three- and Four-star Generals, on the other, on skills for which data are available. Data on the sizes of the differences between the One- and Two-stars and between the Three- and Four-stars, by contrast, is divided. The difference between the lower and higher two ranks appears too pronounced to be an artifact of the differences in the sampling and analytic methods employed between the two efforts that produced these results.

To be sure, there are differences in emphasis between the two studies, notably in the spontaneous expression of interest by the One- and Two-star Generals in communication/interpersonal and resources management skills. These skills were not found to have been considered in any depth by the Three- and Four-star Generals. Thus, it would seem that there are certain skills which must be mastered at particular rank levels; once mastered, they may appear less notable than other developing skills such as the cognitive tasks of planning and problem management that appear to compel attention and to develop progressively and sequentially across ranks.

The Utility of Stratified Systems Theory

Support for the Theory. In its broad outline, the theory was indeed affirmed by the empirical findings.

First, the results showed that the reporting channels of the One- and Two-star General Officers, though more complex than at the lower direct levels of command, are simple relative to those found for Three- and Four-star General Officers (Harris and Lucas, 1991). As expected, the One-star General Officers have

49

more well-defined reporting channels than those of more senior officers. The One- stars were generally directly responsible to a single superior. And, with few exceptions, the reporting chain for Two-star General Officers is also well-defined. The exceptions in both cases are generally of the type in which the General Officer is in either a Joint or Combined position.

Second, the theoretical expectations concerning the relative removal of senior leaders from subordinates and their concern with indirect facilitation were in fact borne out by the data. A degree of deep concern was expressed over the loss of control entailed by such facilitation.

Third, the data point to a decided break between the One- and Two-star Generals, on the one hand, and the Three- and Four-star Generals, on the other hand, on skills for which data are available. This would support Jaques' view of the qualitative difference between the strategic and organizational domains of leader performance requirements.

Fourth, in the view of Jacobs and Jaques, the primary distinction in the leadership work at each of three domains is their relative degree of conceptual complexity. Thus, "executives should have much broader perspectives than incumbents at the organizational level." The progressions in mention of the four mental mapping indices indeed shows that the higher the General Officer rank, the greater the scope of the mental map.

Fifth, these data, coupled with the differences found in expressed needs for planning/envisioning and the ability to deal with uncertainty, support the theoretical tenet that the need for higher orders of conceptual skills and abstract thought increases as one moves from the organizational to the executive domains of leadership. However, the analysis did not address the theoretically asserted distinction between needs for the cognitive skills of abstract analysis and synthesis at the senior and executive leadership levels, respectively.

Theoretical Modification. Notwithstanding these findings, the data also point to certain content areas in which the theory may be in need of modification. These areas are planning/envisioning and mental mapping.

First, the results in the area of planning time frames do not uphold the predictions of Stratified Systems Theory for the task requirements at both the executive and organizational levels in military organizations. The mean time spans for work reported by Generals and Lieutenant Generals are far below the theoretical predictions of twenty years or more, and ten years or more, respectively. The mean planning time frame for Major Generals, 4.71 years, is only slightly below the theoretical prediction of five to eight years, while the mean of 6.72 years meets the

predicted four to seven years. On the other hand, the perfor-
mance capability data (Table 5) approximate theoretical predic-
tions, except for Brigadier Generals who exceed it.

An explanation of the inversion between the One- and Two-
star Generals may be that the Two-stars are more bound than the
One-stars to bureaucratic constraints. For example, twenty-five
percent of all the commentary in the zero to two year categories
addresses Army training cycles which are short and rigidly
prescribed. By contrast, only four comments from two One-stars
(of 58 comments in the appropriate time frames) address pre-
scribed Army training cycles.

However, when the Major Generals either felt free to specu-
late about the future (comment type 3, Table 7, Appendix B) or to
comment about the planning time frames of superiors two ranks
above them (comment type 2, Table 7, Appendix B), their horizons
expanded substantially. It does appear that the senior military
leader is more bound by the organizational system to which he
belongs than his counterpart in the corporate world, sufficient
so that he will by and large limit his expressed opinions about
planning to his own task requirements.

Second, the Jaques model suggests that effective leaders
must have the capacity to understand, though not necessarily to
articulate, the frame of reference of incumbents two levels above
their own. This is essential for full understanding of the
intent of senior commanders one position removed. Thus, it was
hypothesized that the knowledge and skills reported as necessary
by one- and two-star general officers would also reflect begin-
ning awareness of Joint or Combined, international, strategic,
and total system concerns. The majority of One- and Two- star
Generals in the sample did not demonstrate this level of under-
standing, though their not doing so may have been the result of
the specific interviewing techniques used.

Possible reasons for these differences between theoretical
expectation and finding may reside in the complexity of the
military organization itself. The Brigadier and Major Generals
in the sample, even within rank, in fact represent a wide diver-
sity of position responsibilities, and therefore requisite
knowledge and skills. These responsibilities appear to vary in
complexity in accord with what now appear to be three key vari-
ables: professional specialization, position type, and billet
type. These variables impact the frequency with which communica-
tion, interpersonal, cognitive, and personnel management skills
are noted.

Broadly speaking, officers assigned to Joint or Alliance
positions spoke of requisite skills more closely aligned to those
expected at the executive level (Three- and Four-star General
Officers) with a greater focus to the external environment. For

51

Army-only types of positions, there were differences among those with organizational and organization plus installation responsibilities. The level of complexity in positions with installation as well as organizational responsibilities is far greater than for those officers having only organizational responsibilities. Generals assigned to TOE positions with installation responsibilities were more likely to demonstrate the hypothesized requisite skills than those assigned to standard TDA positions. Specific results are grouped below by the three variables of specialization, position, and billet for ease of discussion.

To begin, One- and Two-star Generals in high level staff positions, such as at TRADOC, AMC, DA, JCS (Joint Chiefs of Staff), and DoD, were most likely to describe gaining consensus for one's program. Those officers serving on the DoD, DA, or Joint staffs spoke most frequently of the requirement to translate and interpret organizational policies and directives from higher headquarters for themselves and subordinates. Involved in this process is an interaction of communication skill, cognitive ability, shared frames of reference, and personal values. Networking was consistently mentioned by those occupying these positions as one of the most important elements that enabled them to accomplish their work. Likewise, respondents in Joint and Alliance positions placed great emphasis on the importance of effective communication and interpersonal skills at several levels. The complexity of these organizations and the lack of definitive subordination require the ability to build consensus for coordinated actions.

Within Alliance Commands, although English is the spoken language, an awareness that Allied personnel do not necessarily attach the same meaning to specific words as do Americans is essential. An awareness of the need to be cognizant of and compliant with the requirements of other senior officers not directly in the reporting chain was most notable among the officers assigned to higher level Army TDA or Joint staff positions. It was less apparent among those officers serving in TOE and other TDA organizations.

Lastly, Generals commanding installations and ROTC Regions, for example, noted the requirement to interface effectively with the external environment: local political leaders, the media, and influential societal institutions. Clearly, General Officers in Army staff, Joint, and Alliance positions, no matter the rank, as well as those with installation as well as organizational responsibilities require sophisticated communication and interpersonal skills, and they know it.

The variables of position and billet type also appear to affect the perceived need for cognitive skills. In the area of problem management, only those officers assigned to Army, Joint, or Combined staff positions spoke of decision making and problem

management as two distinct activities. The first involved the selection of a course of action based upon a probabilistic outcome. The second involved managing the problem towards the desired outcome. In the area of planning, the time span for planning differed for Generals with Command responsibilities. Those with both organization and installation functions stressed the need for planning beyond the POM cycle, especially in the area of installation infrastructure development and improvements. By contrast, those with assignments to operational units in Europe, and to some extent in CONUS, planned around the major training exercise events, typically on a yearly basis.

Finally, in the area or personnel management, commanders with installation responsibilities and those who had no installation responsibilities differed distinctly. Those with no installation responsibilities had a limited number of civilian personnel and did not identify this as an issue. The commanders with installation responsibilities, on the other hand, described a need to learn the civilian personnel system in order to effectively execute their installation responsibilities. Similarly to the installation commanders, the officers occupying Army-level and higher staff positions, 40% of those interviewed, reported the need to better understand the civilian personnel system.

To recap what was said above, in the words of one General Officer:

> The broad number of positions the One- and Two-star General Officers may be required to occupy represent widely different levels of authority and responsibility. Indeed some positions require little, if any, additional skills or knowledge than those used at the direct level of leadership.

The distinctions on a number of variables affected by billet and position types suggest the following gradient in ability to perform the tasks thought requisite at the organizational and executive levels: Joint/Alliance, higher level Army billets (TDA), organizational and installation combined (TOE plus TDA -- two "hats"), organizational (TOE), and other TDA positions. In all, based on time horizon and the apparent issues considered salient in the position, the One- and Two-star positions within the Army structure, with the exception of the TOE positions, do appear to span a very broad range, from the lower reaches of stratum six down into stratum four of the Jaques' model, i.e., from mid-organizational to low executive.

The Transitional Nature of Senior Leadership

One- and Two-star General Officers, according to the theory, are in an intermediate domain of leader performance requirements. What seems clear, however, is the sense that it is more transi-

53

tional than intermediate, a virtual "pass through" en route to a higher domain that must be attained swiftly if it is to be attained at all. These One- and Two-star Generals are in the process of making a major transition.

The broad range of positions that One- and Two-star General Officers may be required to occupy points to the transitional nature of this level. These positions represent widely different levels of authority and responsibility. Some positions were found to be well bounded by regulations, policies, and the direct influence of the next superior commander. Indeed some positions require little, if any, additional skills or knowledge than those used at lower levels. However, the majority of positions were broader in scope, increasingly complex, more often defined in general terms, and with greater decision discretion. A typical definition of responsibility for the more complex positions would be, "represent the U. S. Army Chief of Staff and Deputy Chief of Staff for Operations at the NATO conference on arms control."

Added to this is the gross discrepancy between the requirements of such diverse positions and previous experience, which has primarily been at the direct level of leadership. Likewise, most of their training has been directed to that level. Yet, One- and Two-star General Officers must be capable of moving from positions where guidance is explicit to those in which they are expected to deal with broad, complex concepts and to develop creative solutions without benefit of explicit guidance. Officers in the transition phase to the executive level should also show evidence of beginning to understand how the external environment (political, economic, sociocultural, and technological) impacts on their functional requirements, and how they can proactively influence that environment rather than reacting passively to it.

Given these two circumstances, the transition would seem complex and difficult, and indeed the results in the areas of planning, problem management, personnel management bear out this sense. The need to work with longer time spans for planning appeared to be difficult for this group of officers. For twenty or more years, they have exercised the ability to react, to be flexible, and to adjust schedules; they have not had nearly so much practice in proactively developing long-range plans.

The skills inherent in problem management also appear to be a major transitional element in the move from the direct to the indirect level. Most past training and work experiences have involved developing alternative courses of action, and then choosing the one with higher probability of success. Long-term, ill-defined problems for which it is difficult to envision workable courses of action have not been generally considered at the lower levels.

The transition from direct face-to-face influence, as a means of controlling subordinate efforts, to more remote methods of direction, control, and influence was pronounced by these officers to be very difficult. There was a sense of lack of control and increased risk. At the indirect level, to be successful, it is necessary to delegate responsibility and accountability. Many of the officers expressed a great deal of discomfort as a result, not the least part of which was the inability of their own superiors to delegate responsibility and accountability.

In short, there was a pervasive theme of uncertainty among these officers. Most of them shared the sense that they could have been better prepared. In this regard, there is a major difference between the one- and two-star interviews and those of the three- and four-stars. For the latter, the expression of interest in a given area often was associated with an expression of confidence and ability as well. For the former, it was more often interest and concern. In other words, the nature of the discourse from the lower two to the higher two general officer ranks changed dramatically.

Recommendations

At least three recommendations follow from this discussion. First, the relationship between organizational echelon and cognitive complexity is more complicated than originally thought. People within given ranks and echelons in military organizations appear to be required to perform very different tasks and assignments. A formal task analysis that takes into account rank by professional specialization, position type, and billet type would seem highly useful to an examination of the relationship between organizational echelon and cognitive complexity. Second, the results on mental mapping attest to the importance of senior officers' understanding of the roles and functions of a Joint force. The Senior Service School curricula might well be re-evaluated to ascertain if instruction on Joint and Combined operations and Joint war fighting doctrine is adequate for the needs of the next decade. Third, in light of the observations of some of the General Officers about their own on-the-job-training of immediate subordinates, the curriculum at the Army War College may not adequately force aspiring General Officers to challenge logic and question assumptions. Consideration should be given to the use of the dialectical method -- here defined, as classically, to be the active interrogation of information, irrespective of source or of knowledge domain.

THIS PAGE IS MISSING IN ORIGINAL DOCUMENT

56

REFERENCES

AR 600-100. (1987). Executive Leadership. Washington: U.S. Department of the Army.

Ackoff, A. (1978). [TBC, KWL]

Clausewitz, Carl Von (1832). On war. Berlin, Germany.

Daft, R. L. and Lengel, R. H. (1986). Organizational information requirements, media richness, and structural design. Management Science, 32, 554-571.

Daft, R. and Weick, K. E. (1983). Toward a model of organizations as interpretation systems. (Technical Report ONR-DG-04). College Station: Texas A&M University.

Executive Leadership. (1988). U.S. Department of the Army, Special Text. Carlisle Barracks: U.S. Army War College.

Field Manual 22-103. (1987). Leadership and Command at Senior Levels. Washington, DC: U.S. Department of the Army.

Field Manual 22-100. Military Leadership. (1986). Washington, DC: U.S. Department of the Army.

Harris, P. and Lucas, K. W. (in preparation). Executive leadership: Requisite skills and developmental process for three- and four-star assignments. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Hollander, E. P. (1956, July). Variables Underlying Sociometric Status: 1. A Theoretical Model of Idiosyncratic Behavior and Status (Navy Technical Report 4-56). Pittsburgh: Carnegie Institute of Technology.

Hosking, D. and Morley, I. E. (1988). The skills of leadership. In J. G. Hunt, B. R. Baliga, H. P. Dachler, and C. A. Schriesheim (Eds.). Emerging leadership vistas. Lexington: D. C. Heath.

Howard, M. and Paret, P. (Eds.). (1976). On war. Princeton, NJ: Princeton University Press.

Jacobs, T. O. (1983). Cognitive behavior and information processing under conditions of uncertainty. In R. F. Williams and R. D. Abeyta (Eds.), Management of risk and uncertainty in systems acquisition: Proceedings of the defense risk and uncertainty workshop. Fort Belvoir, VA: Army Procurement Research Office.

Jacobs, T. O. (1979). Leadership and exchange in formal organizations. Fort Ord, CA: U.S. Army Organizational Effectiveness Center and School.

Jacobs, T. O. (1971). Leadership and exchange in formal organizations. Alexandria, VA: HumRRO.

Jacobs, T. O. and Jaques, E. (1990a). Executive leadership. In R. Gal and D. Mangelsdorf (Eds.), Handbook of military psychology. London: Wiley and Sons.

Jacobs, T. O. and Jaques, E. (1987). Leadership in complex systems. In J. A. Zeidner (Ed.), Human productivity enhancement. New York: Praeger, 7-65.

Jacobs, T. O. and Jaques, E. (1990b). Military executive leadership. In K. E. Clark and M. B. Clark (Eds.), Measures of leadership. Greensboro: Center for Creative Leadership, 281-295.

Jaques, E. (1990). Creativity and Work. Emotions and Behavior Monographs, Monograph No. 9. Madison, CN: International Universities Press, Inc.

Jaques, E. (1985). Development of intellectual capability. In F. R. Link (Ed.), Essays on the intellect. Alexandria, VA: Association for Supervision and Curriculum Development, 107-141.

Jaques, E. (1976). A general theory of bureaucracy. London: Heinemann Educational Books.

Jaques, E. (1989). Requisite organization. The CEO's guide to creative structure and leadership. Arlington, VA: Cason Hall and Co.

Jaques, E., Gibson, R. O., and Isaac, D. J. (1978). Levels of abstraction in logic and human action. Arlington, VA: Cason Hall and Co.

Katz, D. and Kahn, R. L. (1966). The social psychology of organizations. New York: John Wiley and Sons.

Markessini, J. (in preparation). Executive leadership in a changing world order. The first literature review. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Markessini, J. (in preparation). Executive leadership in a changing world order. A taxonomy of cognitive capabilities for executives. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Markessini, J. (in preparation). Requisite cognitive skills for executives: A cross-sectional study of U.S. Army generals at four ranks.

Markessini, J. and Lucas, K. W. (in preparation). Perspectives on leadership: Opinion and judgment of U.S. Army generals. V. 1. Executive leadership development: The four-star generals. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Markessini, J. and Lucas, K. W. (in preparation). Perspectives on leadership: Opinion and judgment of U.S. Army generals. V. 2. Executive leadership: The lieutenant generals. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

Mintzberg, H. (1973). The nature of managerial work. New York: Harper and Row.

Mumford, M. D., Yoarkin-Levin, K., Korotkin, A. L., Wallis, M. R., and Marshall-Mies, J. (1986). Characteristics relevant to performance as an Army leader: Knowledge, skills, aptitudes, other characteristics and generic skills. Bethesda, MD: Advanced Research Resources Organization.

Simon, H. A. (1977). The new science of management decision. Englewood Cliffs, NJ: Prentice Hall.

Thompson, J. D. (1967). Organizations in action. New York: McGraw-Hill.

Tuddenham, P., Lucas, K. W., Tkacz, S., Stewart, S., and Barber, H. (in preparation). Compressed experience for executive leaders: A creative problem solving course at the Army War College. Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

APPENDIX A

ARI GUIDE FOR U.S. ARMY ONE- AND TWO-STAR GENERAL OFFICER INTERVIEWS

DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U.S.C. 552a)

TITLE OF FORM	PRESCRIBING DIRECTIVE
INTERVIEW GUIDE FOR AWC GENERAL OFFICER RESEARCH (PT5763)	AR 70-1

1. AUTHORITY

10 USC Sec 4503

2. PRINCIPAL PURPOSE(S)

The data collected using the attached interview guide will be used for two purposes. The first is for research purposes. The second is for cirriculum development at the Army War College.

3. ROUTINE USES

This is an experimental interview guide developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name) are associated with the interview protocol, they will be used for administrative purposes only. With the permission of the individual granting interview, the interview contents will be used by both the Army Research Institute and by the faculty of the Army War College for purposes for curriculum development.

4. MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the intrests of the research, but there will be no effect on individuals for not providing all or any part of the information. This notice may be detached from the rest of the form and retained by the individual if so desired.

FORM	Privacy Act Statement · 26 Sep 75

DA Form 4368-R, 1 May 75

INTERVIEW GUIDE FOR AWC GENERAL OFFICER RESEARCH

1. **PRINCIPAL DUTIES AND FUNCTIONS.** (Your personal responsibilities - the heart of your job.)

 a. Could you please describe the key responsibilities and functions of your current position?

  (1) To whom report and from who get requirements? (Note: Probe here to find the full range of requirements sources, personal, regulatory, and legislative as appropriate.)

  (2) From whom get resources?

  (3) Missions and functions of organization?

  (4) Your most important tasks in seeing that these missions and functions are done well -- the things you do because you alone can do them (because of your prospective, unique access, your grade, etc.), or do yourself because you know there cannot be any mistakes.

  (5) The key <u>lateral</u> relationships you must maintain to get our job done well -- contemporaries, counterparts -- and "tricks of the trade" you may have learned.

  (6) The highest priorities you see in your job -- as stated, and how they actually are if that is different.

 b. What are the main obstacles you now face in getting your work done the way your would like to have it done? How are you now dealing with them (or plan to deal with them)?

 c. Who are the key people on whom you now depend either to keep your organization operating well, or to overcome obstacles?

2. **YOUR FRAME OF REFERENCE**

 a. What criteria do you use to judge whether an organization like yours is successful?

 b. Is your current organization successful by those criteria? If not, what does it need to become more successful?

 c. How could someone mak... major error (in judgment, for example) in you position? Cou... you please describe some possible "show-stoppers" that could have major negative consequences?

d. What are the main sources of uncertainty in your job? How do you deal with them?

e. What was your preparation for your current position? (Probe: Looking back on all your developmental experiences, which of them was (were) most valuable in preparing for your current position?)

f. Looking back on your preparation, what would you have wanted that you did not have? What additional preparation beyond what you had would you recommend to your successor?

   (1) Special knowledge, perspective?

   (2) Abilities, special skills, or competencies?

g. Can the USAWC help in this preparation?

   (1) What could the USAWC include in its curriculum beyond what is already there that would help someone developmentally in the track you followed?

   (2) Is there content in the curriculum that you feel is not helpful?

h. What are the most important issues facing the Army and the nation? How can we best deal with them?

3. YOUR EXPERIENCE IN THIS POSITION.

a. did you have specific objectives for what you wanted to accomplish during your tour here? (Did you receive either advice or direction from anyone about objectives that needed to be accomplished?)

b. What have been your most significant accomplishments during this tour?

c. Are there any objectives you have not yet accomplished? Why not?

4. PROFESSIONAL DEVELOPMENT

a. What are the most critical developmental needs of senior leaders in assignments subsequent to graduation from the War College? What is most likely to cause success? Failure?

b. What can the War College do to enhance possible success, minimize possible failure?

c. Are there any changes you would like to see in the objectives, instructional methodologies, or philosophy of the War

College?

       d.   Did you attend both CGSC and AWC, or was one or both of these taken elsewhere?

           (1)   If elsewhere, what do you think you got from the experience that you might not have gotten within the Army system?

           (2)   If elsewhere, do you think you missed anything?

APPENDIX B

POST HOC ANALYSES OF PLANNING

Rules for Tallying Indefinite Time References

Time Intervals: Take the top end of the interval and enter the reference into _that_ term of years. (A "5 to 10 year period" is tallied as a reference to 10 years.) Clearly, the officer himself or others are able to plan out that far as a maximum.

"More than N": Enter the reference into the year category that represents the top of the five-year interval to which the number belongs. More than 6, more than 7 are tallied as 10; more than 20, as 25; and, more than 25, as 30.

Time Span of Work: This was considered to be a separate variable from the planning time frame and is not included in the tally (e.g., "We are talking about something on the order of _18 months to two years_ to write a piece of significant doctrine.")

U.S. ARMY MAJOR GENERALS CITING TERM OF YEARS FOR PLANNING

	Term of Years											# of Direct References	Other[2]
	.5	.75	1	2	3	4	5	6	10	15	30		
1.			1	1			2					4	
2.												0	
3.			2	1								3	
4.					2 (one is 2-3)							2	
5.			1				1					2	1(21-31)[2a]
6.					1			1 (5-10)[3b]	1 (5-10+)[3a]			3	
7.			1	1								2	
8.				1 (1-2)			1		1			3	1(7[2b])
												1	(7+[2c])
9.									1 (5-10)			1	
10.												0	
11.												0	
12.								1	1(6+)			2	
13.	1	1										2	
14.												0	
15.												0	
16.						1 (3-4)			1			2	
17.							1					1	
18.											1(25+)[3c]	1	
19.						2						2	
20.												0	
Total # of References	1	1	5	4	3	1	7 =4	1	5	1	1	30 + 3 = 33	

[1] Time span for a training plan.

[2] This type of comment is made about specific Three- and Four-star assignments and is therefore excluded from the analysis on time spans reported for One- and Two-star Generals.

[2a] "Our Chief [of Staff, U.S. Army, a Four-star General] has some tremendous initiatives in terms of focusing the Army on the out-years. By out-years I mean out to the years 2010 and 2020."

[2b] "I believe they [Generals Otis and Saint] have both been in the Army long enough, they have both been in TRADOC which has been looking out many years in the future, to bring that [experience at TRADOC which has been looking out many years in the future'] with them. In the pragmatic sense of what goes on here, I think we are working in the seven years but tailoring those things with what is seen beyond."

[2c] "I think both of them [Generals Otis and Saint] work on the ability to look out in the planning

arena, of seeing what is there, get studies here or contribute to studies at DA or TRADOC --we do that all the time--by contributing our views to things which are out beyond the seven years."

3 This type of comment is made when the GO allows himself to speculate rather than speak to regimented time frames.

3a "I think what faces us is a continual reduction of the end-force and the end-strength over the next probably five- to ten-year period and beyond."

3b "We have to take the resources that we are going to have when it is all over and which will incrementally decrease over time and have the best resourced and best structured Army that we can possibly have. I think that is the big challenge that we face over the next five to ten years."

3c "I think we are on a threshold of exciting things that will change, I believe, the way we will fight in the future, big-time! I am thinking about directed-energy weapons systems of all kinds--electromagnetic; electro-thermal guns that shoot with velocities, right now with huge power sources and huge barrels, at five thousand meters a second in a vacuum. That is phenomenal. With directed-energy lasers and microwaves and all that kind of stuff, you can probably melt the other guy's electronics without ever hurting anybody, just stop him in his tracks. So those kinds of technological advances should be able to lead us into about the first quarter of the next century."

EXTRACTS OF DIRECT REFERENCES TO PLANNING TIME FRAMES

THE MAJOR GENERALS

1.

A GO must look ahead and question where and what his organization will be in the future

The greatest uncertainty I have about my organization is **where do we want to be five years from now**? How much leadership and what kind of organizational implications are we going to have for J-7 in Joint requirements growth that we are going through now, and how much ability will J-7 have to fix things and to impact on the front end of the resource process? How good will we become and how good do we want to become say in the first P of PPBS? And the Joint, J; the Joint version of PPBS: JP? And what implications does that have for the Joint staff as a whole? Where will that growth stop? Will somebody try to quick-fix it because 'I do all of this, but you don't get any more people or resources or assets to do it' or will we stop and take a measured look at it; and honest to God figure out where we want to be **five years from now, two years from now, one year from now.**

3.

I got a handle on the training and understood the training; understood the training plan, got briefed on to it; **looked out for a year and decided I wanted to make some changes on it.** I gave some guidance for them to go back to work and make a few changes on the training plan.

Well, I think a road map is a good description. What you do is you take all your missions, you take all your contingencies and say what have I got to do if I go to war, if I go to war in this country or this country or wherever. You look at all those, and you pull out what you think you absolutely have to be good at, and then you prioritize them. Then you say, 'Okay, in order to do all these things...**I have got a year to do these things and be proficient at them.**' You kind of design exercises to support that philosophy and then design your training plans so your subordinate units can support that.... It is a great document because it pulls together the Army in one training methodology, so that when I walk out of here the new division commander will come in and hopefully FM25-100 will be working and alive and well in this division and he will not have to learn or redesign a new training plan.

Well, I am trying to do it [the program] **[in] two years.** What I am trying to do is to keep pushing it out. We just finished a two-year calendar. Each quarter when I issue my guidance for the next quarter, **we tack on another quarter way out**, so that we always stay

way out in advance.

4.

I lay out my plan for keeping the force trained, considering the rotation base over here that soldiers are changing-out every two or three years and the summertime is a big turnover time. **I lay out a master activity calendar for two- to three-year period,** as to what are the major functions that we are going to be doing to support this training mission.

Probably three years, although we look at a five-year plan. The reality is that the last two years are so fuzzy that we really do not get much out of that. So I would say realistically three years.

5.

Our Chief has some tremendous initiatives under way in terms of **focusing the Army on the out-years. By out-years I mean well past the five-year program, out to the year 2010 and 2020** in terms of will we have a doctrine that meets the needs of the Army at that time; do we have a modernization strategy that will meet the needs of the battlefield at that time; will the AirLand Battle doctrine be the doctrine that we need and what modification is needed to it? Those kinds of issues are being handled within the DCSOPS, within the Training and Doctrine Command, at places like Fort Leavenworth. That is **where we look for the long-term kind of work.**

Well, we do have the Congressional Fellow Program which you may be referring to. We have several majors and lieutenant colonels, four or five at a time, that spend ten months on the Hill in a Congressional Fellow capacity. What we do with them, we have them come through here, prior to their arrival over there, to make sure **they have been fully immersed in understanding the Army's current budget-year plan** that is there, understanding the thrust of our program goals and the objectives of the Chief.

6.

The CG goes through that; first of all **he looks at the program elements in the three years,** and he may have us move some funds back and forth between funding elements there. He may ask some serious questions about why less or why more money in these program elements through the years. We will adjust that first.

I think what faces us is a continual reduction in the end-force and the end-strength over the next probably **five- to ten-year period and beyond**--a smaller Army.

We have to take the resources that we are going to have when it is all over and which will incrementally decrease over time and have the best resourced and best structured Army that we can possibly have. **I think that is the big challenge that we face over the next five to ten years.**

7.

I participate in the development of the training guidance, **the master training calendar that looks out two years,** the quarterly update of that calendar,...

Heretofore you used to take a planning staff and put it (a JTF) together **a year ahead of time,** dedicate some people, write the whole thing, and then go execute it. Now it is done as a part of your three to five days, maybe a week, where they replicate the provisional courses of action, JCS, the response, crisis-action planning systems. You work through that process and you develop the concept of planning and executing. It is a lot more realistic.

8.

Well, I think we are doing like the Army as far as budget years and programyears, and we try to prioritize all the way out through the program. But like everyone else **our vision of the budget year is a lot better than [in?] the first program year, which is better than the second program year, and by the fifth program year** it is not as keen as [it is] up front.

I believe they [Generals Otis and Saint] have both been in the Army long enough, they have both been in TRADOC which has been looking out **many years in the future,** to bring that [experience looking out] with them. In the pragmatic sense of what goes on here, I think we are working in **the seven years** but tailoring those things with what is seen beyond. It really depends on what arena you are talking about. If you are talking about the intelligence arena where they may be aware of certain things that are happening, then their determinations of war fighting capabilities have them thinking out in the future. If you are talking about the AirLand Battle and FOFA and some of those capabilities, they are thinking out there in the future. If we are talking about RPMA and maintaining the current weapon stocks and the allocation of those kinds of bucks, it is a much nearer kind of focus. [differentiates between areas that need long-term and near-term planning] I think both of them work on the ability to look out in the planning arena, of seeing what is there, get studies here or contribute to studies at DA or TRADOC--we do that all the time--by **contributing our views to things which are out beyond the seven years.** At the same time they have a **very good grip** on how you work the near-end and try to

convert those plans into program and budget. (1)   6

9.

Mostly your combat developments businesses are up to how we would fight <u>the next war that might be four or five years from now</u> or <u>the war that might be ten years from now.</u>

12.

<u>We work from the instantaneous problems out to six years</u> and beyond. For example, <u>the DPQ, the defense planning questionnaire, covers six years that we project</u> forces and so forth to NATO. Even in the years beyond that, the policy guidance for the armament guys is to look out ahead and say, 'This is what we need. Let's get going with the cooperative armaments programs to be able to put that better hardware on the battlefield.

13.

He has since, in the last week, given me some <u>six-month and nine-month goals;</u> but I would say they are objectives and tasks....De facto, he wants me to open up the schoolhouse doors every day for some 1,700 students that we teach here, which is incidentally a massive increase from when you and I went to this place--and that leads to different job requirements.

16.

For instance in Panama <u>I am looking down the road toward the treaty in 1999</u> and the threat in Central and South America. I feel that I am one of the principal guys that has to sit here and watch all the indicators--not only INTEL indicators but the operational indicators of future requirements and things like that and meld that all together and be the watchdog, to send something up the pipe as I start to see things begin to unfold. I have to look toward the future, but I have to spend a lot of time on what is going on now and what may be going on in the future based upon reading anything I can get a hold of.

I understand the policy predicament that this country is in. I can look down the pike of future requirements, whether we need to send MTT, training teams, in the future, <u>what direction will aid likely take in the next three or four years</u> to overcome these or those shortcomings, how is the threat going to change in the future? Right now, just what you have seen in the landlocked war, you look at the implications for the future even if that war is over tomorrow. Long-range ballistic missiles, in the hands of third-

world countries, that can be launched to deliver conventional munitions, chemical munitions, from a distance.... What does that mean for the future if you are an Israel or if you are an ally of an Israel? [Inaudible.] If you are the United States Army and you have got to go in and do something about it, is your chemical capability--not only for chemical defense but for chemical offense--up to speed; can you exist in that environment against a third-world country if you have to, or have you let that capability go away.

17.

We are in the process of orking on a plan for them [i.e. the roundout brigade fcr his u..ision] **for the next five years.**

18.

I think we are on a threshold of exciting things that will change, I believe, the way we will fight in the future, big-time! I am thinking about directed-energy weapons systems of all kinds--electromagnetic; electro-thermal guns that shoot with velocities, right now with huge power sources and huge barrels, at five thousand meters a second in a vacuum. That is phenomenal. With directed-energy lasers and microwaves and all that kind of stuff, you can probably melt the other guy's electronics without ever hurting anybody, just stop him in his tracks. So those kinds of technological advances should be able to lead us into about the **first quarter of the next century.**

19.

They do not have to volunteer because we are responsible for training. **We lay that out hopefully five years in advance,** and we get concurr ce from the Chief of the National Guard Bureau on **the five-year p..n.**

We try to ensure that the National Guard roundouts have in their **five-year plan** at least one trip to the National Training Center. We work that pretty much regularly. We work also through division commanders. They are really our agents and the program managers.

	Term of Years															# of Direct References
	.5	1	1.5	2	3	4	5	6	7	8	10	12	15	20	30	
1.				1			1			1						3
2.		1														1
3.		2					1									3
4.																0
5.																0
6.																0
7.																0
8.																C
9.							1									1
10.	1			2				2				1	1 (6-15)	2 (15-20)		9
11.																0
12.																0
13.																C
14.																0
15.								1 (5-6)								1
16.																0
17.				2		1 (3-4)	4	1 (5+)						2		10
18.																0
19.						1 (3-4)	1 (1-5)						1			3
20.																C
21.		1 (6-18mo)														1
22.							1									1
23.												1 (10-12)		1		2
24.													1			1
25.																0

	Term of Years															# of Direct References
	.5	1	1.5	2	3	4	5	6	7	8	10	12	15	20	30	
26.		1		1			1									3
27.																0
28.																0
29.	1	1										1		1 (5-20)		4
30.																0
31.																0
32.							1									1
33.		1		1	1 (2-3)		1							1		5
34.																0
35.																0
36.											1				1	2
37.							2				2		1 (10-15)		1 (20+)	5
38.																0
39.				2 (one is 1-2)			2	2 (5-6)	1 (5-7)			2				9
40.																0
41.							1				1		1	1		4
42.					1		2									3
Total # of References	1	7	1	9	2	4	17	6	1	1	4	5	5	8	2	73

EXTRACT OF DIRECT REFERENCES TO PLANNING TIME FRAMES
THE BRIGADIER GENERALS

1.

We work to the POM years so **we are focusing out right now to 1997,** and in theory if it were a near-time thing, the current budget year, it would be an OD responsibility and then we would pick up on all of the POM years. Point of fact is we work them all.

What we are trying to do is work the future piece on the automation. We have a lot of energies and resources going in that. **Will I see that under my watch? Not unless I stay here five years,** I won't. But if we do not start it moving, we are never going to get well.

We've got some tails out there that are still being worked. The PEO-PM structure, for example. We just walked away from that one for awhile, and it is just now being brought back together so we can figure out what is needed. We are probably a year away from having a knot tied around that which means that **two years after** the point of decision to do it a new way we finally go in to tackle the resources you need to get the job done. But that has been a very difficult one.

2.

My training right now is resourced by a separate brigade; as a consequence, we are doing everything on a shoestring. If I can get a division, division staff, division support command, and all that behind me as part of my effort, I can do a lot more elaborate and in-depth training evaluation That will start really to kick in next summer **about a year** from now.

3.

We are working also on a **one-year-out program** and a **five-year-out program**, where do we want to be vis a vis the Germany Army, for instance, five years from now. To do that you have to know where we are now in the various categories of training, doctrine, force structure, and combat developments.

So you really need to stop and say, 'Wait a minute. I need to stand back. I have some clear azimuths; I have some clear objectives, and I am going to force the system to fill in my holes rather than just respond to my in-box.' It can keep me busy 12 to 14 hours a day, seven days a week forever, and in the end you would never know what you had accomplished. So what we have recently

done, and General Downing, the new DCST, has agreed with me, is we had a session--and this is not a completed project, but it is our latest--that sort of **lays out where we are going for the next year,** and it also has some vision, some architecture for the future.

9.

The mission in that job, as I defined it, was to develop the structure for a new infantry division, motorized, put all the off-the-shelf high technology you could find into it, **and get it done in four years.**

10.

From these long-term planning areas then, the long-term planning guidelines originated as well as what we started for the first time last fall--**our long-term force proposals, which look out now 15 to 20 years in the future.**

And for the first time last fall we went out with long-term force proposals, which now have just been approved by the ministers as long-term force goals. One of them was removed. **Before we were looking at all of our force goals in a six-year window.** Now we have eliminated the barriers. We can go from the beginning, all the way out as far as the threat will take us.

Interviewer: And right now, that is out...

Response:

Fifteen to 20 years. The object here is to get ahead of the country, so that you are trying to harness its technology into what we, NATO, want it to develop ... as forces as opposed to what we want in the six-year window, which is your mid-term planning, where you had to accept whatever they brought to the table [repetition]. They developed a tank and here it is; you either accepted it or not. Obviously, we would accept it. With the long-term--and this is an innovation--we are now and in the future going to be more and more driving their efforts long-range.

Interviewer:

I have taken you down some lines. What I would like to have you do is come back in now. We have talked about this long-term planning, resourcing, programming component that is the SACEUR's tool to actually accomplish this work out 15 to 20 years. You have one cycle that is about a two-year cycle.

Response:

It is a two-year cycle, but for basically a six-year planning period.

Each slice is **one year**, and we have an ASLIP, ACE Long-term Infrastructure Plan which **goes out 12 years** now.

Simplistically, if you track that through from back before you started the oral guidance, **it is about a two-year process** just to get to a force goal and then an evaluation the first time.

You are talking a six-year mid-range, 15-year long-range. It is a whole set of rules that are really quite different.

15.

Our **five-year program** which we have worked on here in the last few months and, of course, **maybe a six-year** because the way the two-year budget process will work, we will probably have a six-year program now instead of a five-year.

17.

From the commissary perspective, we are currently in a process with Peat Marwick Main of defining for this agency, for each of our functional areas, our long-range business **strategy into the year 2008.** We are doing the business strategy route, vis-a-vis the long-range planning route because of the influence of the commissary program and the fact that is of more of a business-nature than perhaps you would classify other major commands and operations within the Army.

We are trying to look-- as the rest of the Army is, in consonance with the Chief of Staff's guidance--**out to the year 2008.** And then have a series of things that bring us more into focus. Of course, a big shaper is the **Army's programming and budgeting system, PPBES. That hones you into five years.** And then **there is the POM-building process and the focus you get with it into your year of execution and the follow-on year.** We also, as I indicated, try to--in conjunction with that, functionally in consort with our long-range business strategy as our umbrella--**look five years out,** because many of our functional things have to be tied into the resources picture. We have to work those in concert.

Every year...And I have already approved for FY89 the top 22 things that we are going to concentrate on to try to get done **next fiscal year.** Or if they are not accomplished next year, it is at the least the year in which they have to start in order to **ensure that we achieve them by '92 or '93.**

Interviewer:

<u>That five-year-forward look</u>, that is about the time frame that is comfortable to work on?

Response:

We are working <u>a little bit in advance of that</u>, but that is really the time frame that we pretty much have to have everything in focus and solidified in order to get into the resource competition business for those things that we want to do that are going to require resources.

I can tell you at any point in time <u>five years into the future</u> what is in the program and in what fiscal year we are looking to construct it.

Yes. So you can see how those being <u>my five</u>...I hope that where we have gone over the course of four and one-half years has not been shotgun and halter-skelter but [instead] oriented to that overall target out there.

19.

And then I have a long-range plan that takes me into the POM years, <u>'90 to '94,</u> and the long-range or extended planning annex--and that takes you from <u>'95 to about 2004.</u>

The way I have this set up, this is for the long-term, I have some general concepts, I call them strategic sightings. I have about 15 of them that say, 'Do these generic things.'

There was only one piece of it. I have done this since I was a battalion commander. They had something like this, but they did not take it out beyond <u>three or four years</u> at the most. Nor did they bring it back into specific things to be accomplished that we could all agree on, that would serve as our support forms for what we needed to do during the year. There was a base point there that I used and I broadened it adding my own dimensions. It is just me, and that is the way I have done it.

21.

That is part of what you have to do. You have to plan all that out. The boss has really worked hard to make people understand that they have to look out <u>six months, a year, 18 months</u> at the requirements that they have in terms of events; but they also have to look at what the requirement to be trained is.

22.

My long-term objective right now, my principal long-term objective is building the team personnel for next summer. As with all these types of things, we are going to have a big turnover next summer. It will be in the general nature of about one-third of all of our people. **Three years is probably a fair, back-of-the-envelope description**.

23.

Now, I have got one project which not only is going to examine how we evolve over time, but also how the entire Army intelligence functional area evolves for **the next 20 years** and the programmatics associated with that. I have to look at every echelon of the Army, across that, in every theatre.

We have a system which causes us to lock-in decisions so early that by the time we go through our typical **ten- to twelve-year** process to get that system put in the field, it is overtaken by technology leaps and bounds.

24.

We are looking at 2004 right now on some of the things that we are doing. We think in terms of life-cycle sustainment, and we think in terms of pre-planned product improvements. Because we know that you can only do so much, let's go ahead and get something out, and we need to be planning it now for the improvement. It might be an improvement driven by a change in technology.

26.

One year. DLA does not run on a POM. Whether they will in the future, I do not know, but it does not now. We do not look at five-year spans of operations as the services do. We **look at yearly budgets**, actually **two yearly budgets**, all the time.

In terms of my work, the only things that we would have that would be beyond the budget year would have to do with real property or military construction projects. ... That is **five years past the budget year,** so we go into about 1993 at the moment.

29.

Interviewer:

Way out into the future--5, 10, 15, 16 years from now?

Response:

In the 21st SUPCOM we **never went out past a year**. In this job, one
of my missions is to get the Army **ready for the year 2000**—all of
my plans, all of my logistics automation. But you have to be
sensitive to the poor guy out in the field. My computer plans for
the C-TASK 2, Corps, theatre, ADP service center is for the year
2000, but some of those people out there are not going to get this
computer until 1995.

The job here, we think out everything we do. I tell my people,
'The decision you are making today, what is it going be like **5, 10,
15, 20 years from now**?' In the 21st Support Command in the field,
if I could get out six months that would be pretty good. It is
tough to get beyond that.

32.

Well, those are tough. They are what I call the qualitative
dimensions of what we do in analysis. Usually what makes those
tough is that it is very difficult to bound them. For example, **in
five years** what will be the French role in NATO?

33.

Well, of course, you never really get anything fixed, but I think
it is going to take **one more year** of virtually 90 percent effort or
maybe all the effort you can put into it to get all the U.S. side
institutionalized, fixed, up and running, and at the same time do
the CT stuff and at the same time do the contingency planning, the
day-to-day ops. Once you get the war plan fixed, which we have,
and you get the targeting fixed and you get into the wartime basing
and you get into command and control, once you get all those things
going down the road, I think you can probably turn a little bit of
attention to other things. I would say that there are probably
about two more years of pretty much devotion to U.S. problems and
fixes.

Based on what I have seen of NATO, it will take **another 20 years** of
the alliance. I am probably a little pessimistic. I think some of
the...Because what we have got to do is to convince them at all
levels, including the council at Brussels, that SOF is important to
them.

I have tried to put in a **five-year budget**; I have tried to get a
budget that shows a requisite amount of monetary growth to support
the personnel growth that we are authorized to support the expanded
mission. I have tried to get into the exercise plan, and I have
tried to flag the shortfalls where it appears to me that in the
out-years we cannot do what we need to do in order to meet our

requirements.

One of the long-term goals is to grow this headquarters until it reaches a critical mass, so that it can operate independently from USEUCOM and move away to its wartime location. But that is **two or three years away.**

36.

Three years into my job I got a second LOI from the Secretary **telling me where to go for the next decade.** I get a good bit of guidance on what it is they want me to do.

Interviewer: How far out do you have to look?

Response:

I figure 30 years. There are a couple of things that I am doing to position the Center and the history programs that deserve a 30-year look. If you say, 'Things are awfully fuzzy out there,' I say, 'Yes, but if I would say 20 we would look out ten.' But if I say I want to look out 30, it forces us to ask questions out there. In fact, I would argue that one of the chief problems with American military planning is that we have not disciplined the long-range look effectively enough. Long-range thinking almost always gets subsumed in short-range action, so unless you dedicate yourself or some member of your team to really step back and look out and free that person--force him to ask tough questions, take off blinders and parameters, think about it in a fairly systematic way--your plans tend to be far more short range than they ought to be. How good am I out past the POM years? Not very good yet; I have not been at it that long--only for a couple of years have I been trying to push the thinking out past this century.

37.

I do my planning and programming and build my long-range plans, **10 to 15 years out**, I network with each one of the Army components and the RM shops of the CINCs--normally the deployed CINCs. You will find that happening at the DA level too.

We have moved from a five-year long-range plan to where we have a very definite **10-year long-range plan.** We have just completed it for the first time because of the Vuono/Thurman relationship.

So, instead of building a five-year plan, I am now building **a 10-year plan** in great definition. I have a further long-range plan that I have just published, again as the result of the Vuono/Thurman relationship--the Chief of Staff and CG--**that takes us out to 2010.**

...but I will spend a lot of time on the planning and programming side--for resourcing, not for deployment, doctrine, or combat development--with CENTCOM's J-8 shop which builds the five-year plan and submits it to OSD **as I build my five-year PARR** and submit it to DA, which submits it as a service feeding into the CINC. We are going to see more of that, and Generals are going to get more involved.

39.

Interviewer:

So you are running the PPBS system at _five, six, seven years out_?

Response:

That is right. When I look at the MCA construction for the five sub-communities that I have, that is programmatic. That is certainly in the RM's business, the DEH's business, the ACS engineer's business.

One of the tasks that we are working on right now is what will the combat maneuver training center look like **in the year 2000**; that is long-range planning. That is on the training side of the house. I would say that there are long-range planning or requirements across the entire spectrum of the command. The actual operation of the major training area that is near- or short-term because you are generally **looking a year or two years out** in scheduling.

But that is only one staff activity, and that is truly just the SPO who is in the scheduling aspect. When you are looking at the upgrade of ranges and facilities--unless you are talking under the dollar threshold which makes it operations and mission money versus the long-term MCA dollars--**that is a five-year process**. So I guess the definition of long-term planning is...Really the lines get fuzzy; to say that the T side of the house does long-term planning and the 7th ATC side of the house does not do long-term planning, it depends on which of the entities we are talking about.

When you look at the upgrading of ranges with new targetry, because of the dollar threshold we may be able to do that in the short-range and that is the T side of the house. When we look at changing policies on how we train in Europe and those things that we are going to try to do in training in Europe, I would say that is not long-range. When we look at what the training areas and what the combat maneuver training center **will look like in the year 2000 and how we will train there using simulations and other devices, that is long-range;** that is on the T side of the house also. There is a little bit of separate and distinctness in it. For example, if I look at the T side of the house in the training support branch, they are responsible for the procurement of

devices. So if I tell them that I want to buy MILES devices, assuming that I had the resources to do that, that is a short-range requirement. It truly is subject-dependent and activity-dependent, rather than trying to draw lines on one side versus the other.

Interviewer:

And I was not trying to draw the lines in that form, I was just, in your own mind, as you have looked at the kind of work that needs to be done there...On the T side of the house, you are looking at at least one project that is out about 12 years, thinking and trying to envision what that is going to be like. On the policy side of the house, is there anything similar to that? What would you say would be the longest project on the policy side of the house?

Response:

That is a hard one for me to assess right now. We certainly are looking at training areas and how we are going to develop the training areas, not only the combat maneuver training center but all training areas in the next five to six years.

Part of my success you cannot measure now. For example, for me to take credit for anything that is happening right now or a year for now on construction of any of the major training areas, unless it is OMA dollars that I have control of right now, would be taking false credit. Because right now, for example, the long-range vision of my predecessor once, two-, and three- times removed is coming to fruition now. So maybe five or six years from now you have to come back to the guy who succeeds me and say, 'How did (Blank) do it?' In 1993 when you come back and look at the CMTC and ask, 'How is it operating now?' that will be a measure of how well I did.

In this scope I truly believe that it is a broader perspective in that you are looking at the theatre for the DCSOPS and for the CINC in the training arena, and you are looking at the community in the same perspective through the five-year development plan. You are also looking at the day-to-day execution at the community level, in the scheduling of ranges, in the short-term scheduling of major areas--short-term being two years. Again, it is a overlayed process--and to be quite frank with you--a process that I was not fully cognizant of before I took the job.

41.

It depends on what area you are looking at. You might look at a year, or five years, or 10 years, or 20 years. We have members of study groups who are looking at the Army and where we might be in 20 years. It depends on the issue how far you can project out. Things such as demographics, when you know that the male population

is declining and predictably you know it is--because you know what the birth rates are right now--you can project a good many years ahead.

42.

If we project them out far enough it is to maybe stay in contact with the 310th and all of the other people who come and work with us during wartime and get them to come over for these exercises. Have some kind of **five-year plan** where we can say that here is what we want to do two years from now. As we go through our budget process we can also take the dollars and put them against the plan and lock it in so that no one can change that but the Commanding General.

If nothing else we can then establish a blueprint **that runs up to about five years** as opposed to doing something in the short term. That is how I hope to move toward that because General Lewi has already put in place, he himself, a road map.

I will always go back in and say that I recommend we do this and that here is what we are looking at, here's where the Army wants to be **three years down the road**, but if we go ahead now at least we will have our plans in place and maybe get the systems a little earlier.